XR-C5100

SERVICE MANUAL

US Model
Canadian Model
E Model

Model Name Using Similar Mechanism	XR-4800
Tape Transport Mechanism Type	MG-25F-136

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
17 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08% (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	58 dB

Tuner section

FM

Tuning range	FM tuning interval: 87.5 – 107.9 MHz (US, Canadian model) 50 kHz/200 kHz switchable 87.5 – 108.0 MHz (at 50 kHz step) 87.5 – 107.9 MHz (at 200 kHz step) (E model)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.5% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

AM (MW)

Tuning range	AM tuning interval: 530 – 1,710 kHz (US, Canadian model) MW tuning interval: 9 kHz/10 kHz switchable 531–1,602 kHz (at 9 kHz step) 530 – 1,710 kHz (at 10 kHz step) (E model)
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz.
Sensitivity	30 µV

SW (E model)

Tuning range	SW tuning interval: SW1: 2,940 – 7,735 kHz SW2: 9,500 – 18,135 kHz (except for 10,140 – 11,575 kHz)
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	50 µV

– Continued on next page –

US, Canadian Model
FM/AM CASSETTE CAR STEREO
E Model
FM/MW/SW CASSETTE CAR STEREO

MICROFILM

SONY®

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	40 W × 4 (at 4 ohms)

General

Outputs	Power antenna control lead/Power amplifier control lead/Telephone ATT control lead (E model only) Rear line out (1)
Tone controls	Bass ± 8 dB at 100 Hz Treble ± 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 181 mm ($7\ ^1/_2 \times 2\ ^3/_8 \times 7\ ^1/_4$ in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 164 mm ($7\ ^1/_4 \times 2\ ^1/_8 \times 6\ ^1/_2$ in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb. 10 oz.)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

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Flexible Circuit Board Repairing

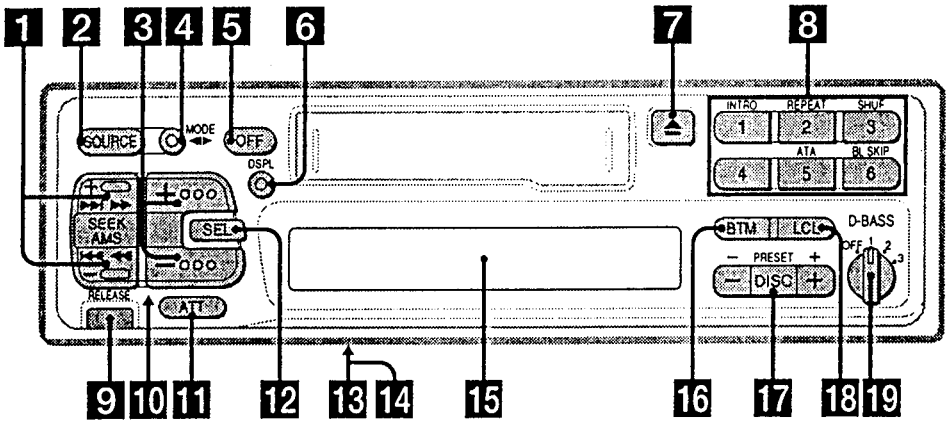
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

This section is extracted from instruction manual.

Location of controls



Refer to the pages for further details.

1 SEEK/AMS button 5, 6, 7, 8, 9, 10

2 SOURCE button (TAPE/TUNER/MD/CD) 5, 7, 9

3 ⊕⊖ (volume/bass/treble/left-right/front-rear control) button 5, 8

4 MODE (◄I►) button
During tuner reception:
BAND select 7

During tape playback:
Transport direction change 5

During MD/CD playback:
MD/CD Unit select 9

5 OFF button 4, 5

6 DSPL (display mode change/time set) button 5, 6, 8, 9

7 ⏏ (eject) button 5

8 During radio reception:
Preset number buttons 7

During tape/MD/CD playback:
① INTRO button 6, 10
② REPEAT button 6, 10
③ SHUF (Shuffle) button 10
⑤ ATA (Automatic Tuner Activation) button 6
⑥ BL SKIP (Blank Skip) button 6

9 RELEASE (front panel release) button 4, 12

10 Reset button (located on the front side of the unit hidden by the front panel)
Press this button when you use this unit for the first time, when you have changed the car battery, or when the buttons of this unit do not function properly.

11 ATT button 8

12 SEL (control mode select) button 5, 8, 9

13 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.

14 Frequency Select switch (located on the bottom of the unit) (E model)
See "Frequency Select Switch" in the Installation/Connections manual.

15 Display window

16 BTM (Best tuning memory) button 7

17 PRESET/DISC button
During tuner reception:
Preset stations search 7

During MD or CD playback:
MD/CD Unit select 10

18 LCL button 8

19 D-BASS control 8

Each time the position of switches 13 or 14 is altered, be sure to press the reset button after connecting the power.

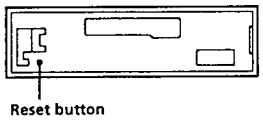
EN

Additional Information

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.



Reset button

Note
Pressing the reset button will erase all the memorized program and memory functions.

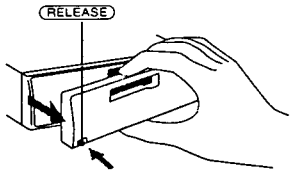
EN

Detaching the front panel

The front panel of this unit can be detached to prevent the unit from being stolen.

1 Press (OFF).

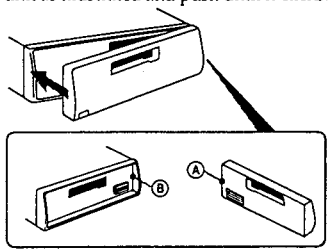
2 Press (RELEASE) to detach the front panel then gently pull it out.



Notes
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you press (RELEASE) to detach the panel while the unit is still turned on, the power will automatically turn off to protect the speakers from being damaged.*

Attaching the front panel

Attach part Ⓐ of the front panel to part Ⓑ of the unit as illustrated and push until it clicks.



Notes
- *Make sure the front panel is right side up when attaching it to the unit as it cannot be attached upside down.*
- *Do not press the front panel too hard when attaching it to the unit. It can easily be attached by pressing it lightly against the unit.*
- *When you carry the front panel with you, keep it in the supplied front panel case.*
- *Do not press hard or put excessive pressure on the display windows of the front panel.*
- *Do not expose the front panel to direct sunlight, heat sources such as hot air ducts or leave it in a humid place. Never leave it on the dashboard etc. of a car parked in direct sunlight where there may be a considerable rise in temperature inside the car.*

Caution alarm

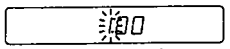
If you turn the ignition key to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch is set to the Ⓐ position). If you connect an optional power amplifier to the LINE OUT and do not use the built-in amplifier, the beep tone will be disabled.

Setting the clock

The clock has a 12-hour digital indication.
For example, setting it to 10:08

1 Press (OFF) or (DSPL) during operation.

2 Press (DSPL) for two seconds.



The hour digit flashes.

❶ Set the hour digits.

To go forward
To go backward

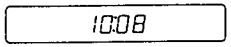
❷ Press (SEL) momentarily.

The minute digits flashes.

❸ Set the minute digits.

To go forward
To go backward

3 Press (DSPL) momentarily.



The clock starts.

Note
If the POWER SELECT switch on the bottom of the unit is set to the Ⓑ position, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio.

EN

Installation (US, Canadian model)

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- Choose the mounting location carefully so the unit will not interfere with driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

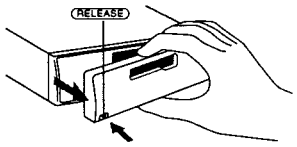
To detach

Press (RELEASE) to detach the front panel then gently pull it out.

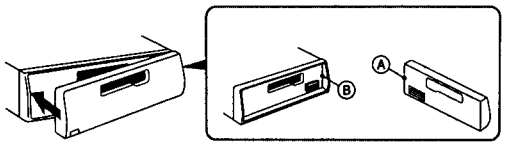
To attach

Align parts Ⓐ and Ⓑ, and push the front panel in until it clicks.

To detach
Retrait

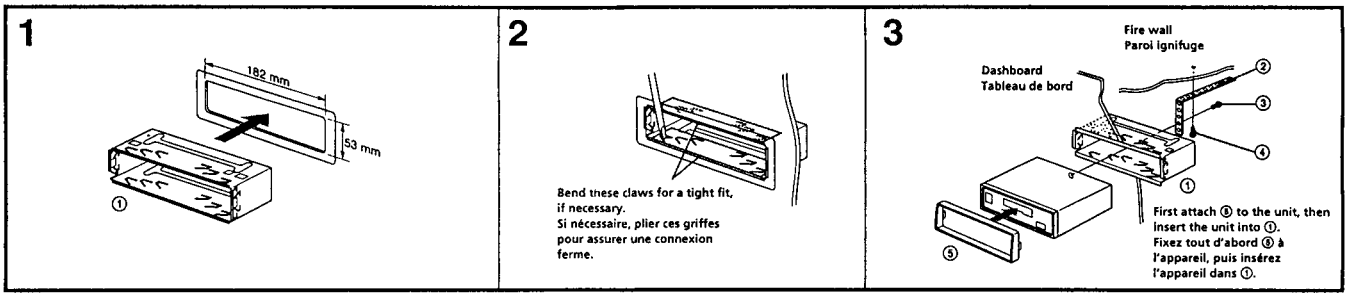


To attach
Pose



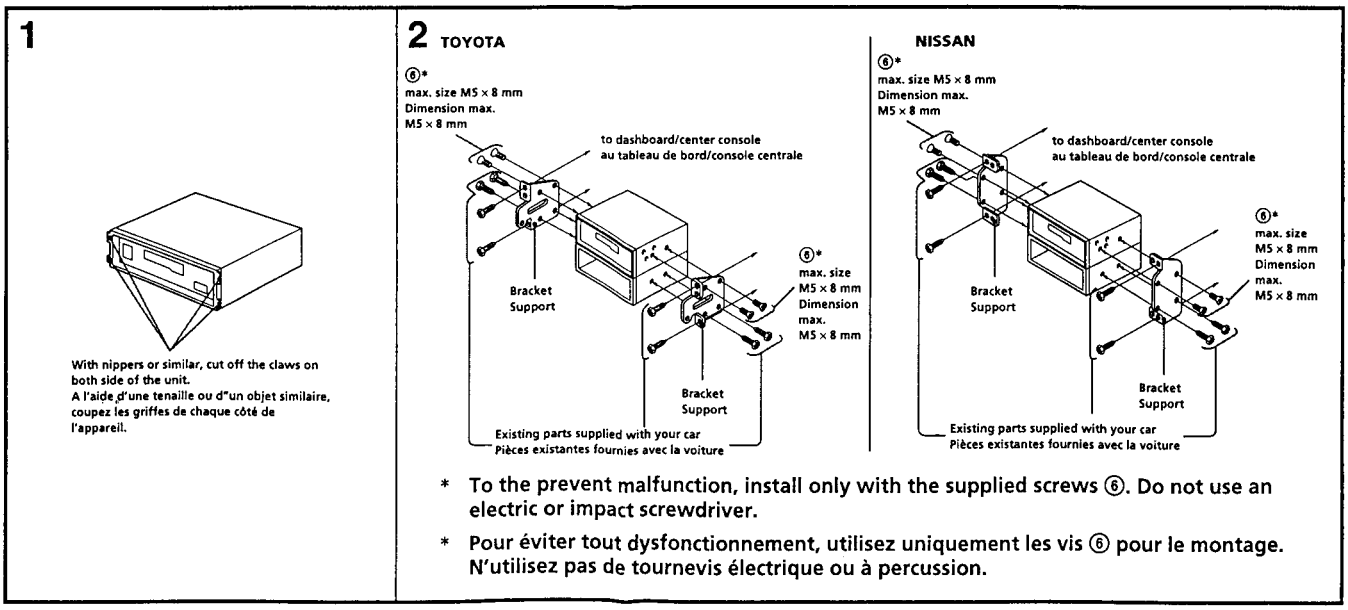
Mounting Example

Installation in the dashboard



Mounting the Unit in a Japanese Car

This unit may not be installed in some makes of cars. In this case, consult your nearest Sony dealer.



* To the prevent malfunction, install only with the supplied screws ⑥. Do not use an electric or impact screwdriver.

* Pour éviter tout dysfonctionnement, utilisez uniquement les vis ⑥ pour le montage. N'utilisez pas de tournevis électrique ou à percussion.

Installation

Précautions

- Ne pas toucher les quatre orifices sur le panneau supérieur de l'appareil. Ils servent aux réglages du tuner qui ne doivent être effectués que par un technicien.
- Choisir soigneusement l'emplacement de l'installation, pour que l'appareil ne gêne pas la conduite.
- Eviter d'installer l'appareil dans un endroit exposé à des températures élevées, comme en plein soleil ou à proximité d'une bouche d'air chaud, ou à de la poussière, saleté ou vibrations violentes.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 20°.

Retrait et pose du panneau avant

Avant d'installer l'appareil, déposer le panneau avant.

Retrait

Appuyez sur la touche (RELEASE) pour dégager la façade amovible, puis sortez-la délicatement.

Pose

Aligner les points Ⓐ et Ⓑ, puis pousser l'appareil jusqu'au déclic.

Exemple de montage

Installation dans le tableau de bord

Installation de l'appareil dans une voiture japonaise

Cet appareil ne peut pas être installé dans certaines voitures. Consultez, dans ce cas, votre concessionnaire Sony.

Installation (E model)

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- Choose the mounting location carefully so the unit will not interfere with driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

Press (RELEASE) to detach the front panel then gently pull it out.

To attach

Align parts Ⓐ and Ⓑ, and push the front panel in unit it clicks.

Instalación

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera con la conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire caliente de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, emplee solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

Para extraerlo

Presione la tecla (RELEASE) a fin de abrir el panel frontal, y tire de él hacia afuera.

Para instalarlo

Alinee las partes Ⓐ y Ⓑ, y presione el panel frontal hasta que chasquee.

安裝

使用前須知事項

- 請勿擅自觸動本機頂部的四個小孔。該孔只供專業人員調整調諧機時之用。
- 本機請放在不妨礙司機駕駛之處。
- 避免把本機放在高溫之處，如陽光直接照射、暖氣機前、或灰塵極多、髒亂或易受震動等地方。
- 為了安全起見，安裝時請使用附屬的安裝道具。

安裝角度之調整

請在 20 度以內調整安裝角度。

前板之裝卸

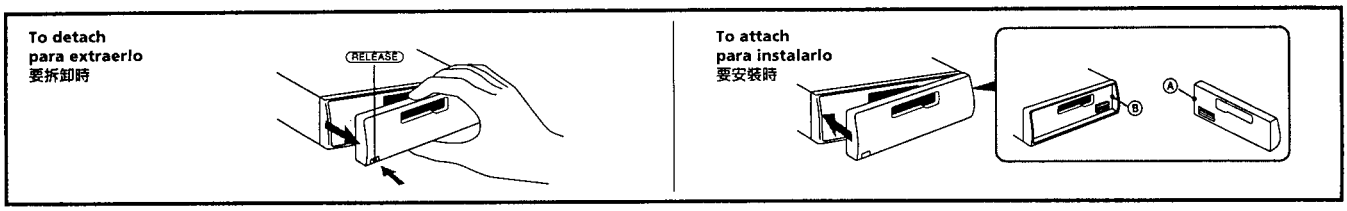
開始安裝以前，請先拆下前板。

要拆卸時

按下 (RELEASE)（釋放）按鈕以放開前面板，然後輕輕地把它取下。

要安裝時

如圖所示，對準位置 Ⓐ 和 Ⓑ，然後將左側向內壓入，直聽到卡嗒聲響。



Mounting example

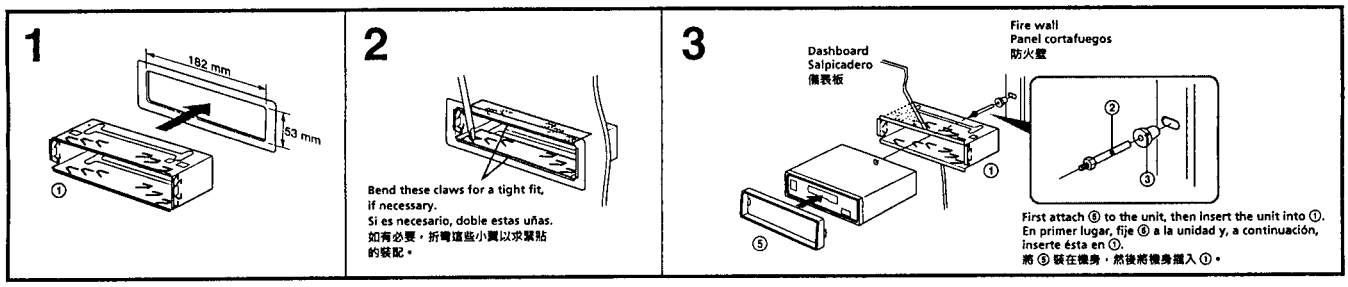
Installation in the dashboard

Ejemplo de montaje

Instalación en el salpicadero

安裝例子

安裝於儀表板上



Mounting the Unit in a Japanese Car

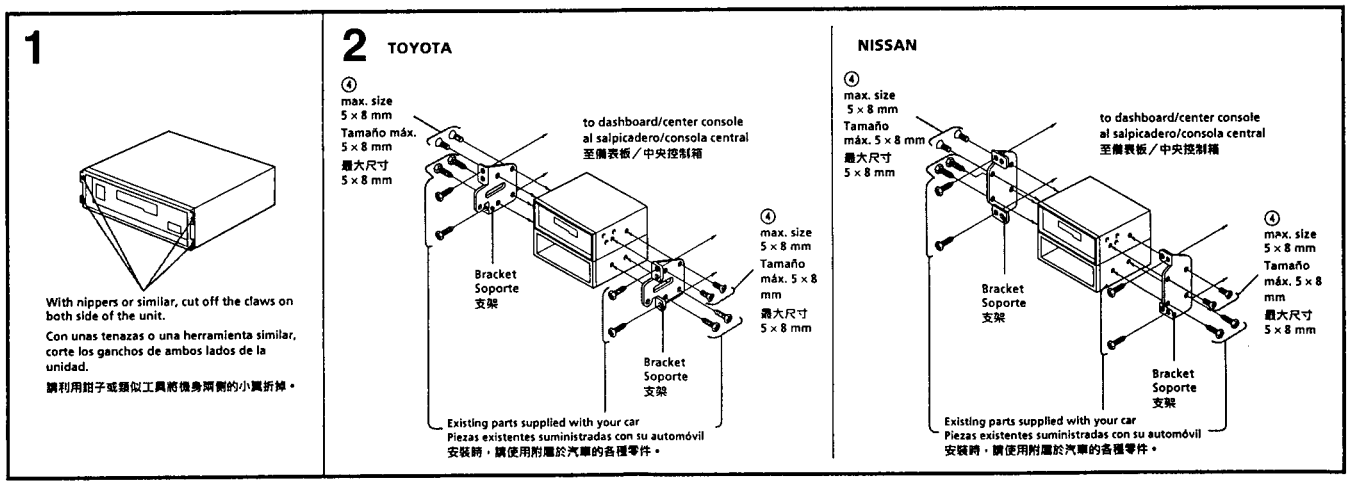
You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

Montaje de la unidad en un automóvil japonés

Usted no podrá instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su proveedor Sony.

要安裝於日本汽車裡

有的汽車不能安裝本機，此時，請向離貴地最近的 Sony 經銷店查詢。



Note

To prevent malfunction, install only with the supplied screws ④.

Nota

Para evitar que se produzcan fallos, realice la instalación solamente con los tornillos suministrados ④.

注

為防止發生故障，安裝時只能使用附屬的螺絲 ④

Connection

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key switch is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating.
  If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating.
  If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery.
  If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT switch

The illumination on the front panel is factory set to be turned on even while the unit is not in use. However, this setting may cause some car battery wear if **your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ⓑ position, then press the reset button.** The illumination is reset to stay off while the unit is not in use.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓑ position.

Frequency Select Switch (E model)

The MW (FM) tuning interval is factory set to the 9K (50 K) position. If the frequency allocating system of your country is based on 10 kHz (200 kHz) interval, set the switch on the bottom of the unit the 10 K (200 K) position before making connections.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Antes de realizar las conexiones, desconecte el terminal de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables conectores de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- Cerciórese de conectar el cable conector de alimentación rojo al terminal de 12 V positivo que se energice al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil que tenga una capacidad superior a la del fusible de la unidad.
  Si conecta esta unidad en serie con otros componentes estéreo, el circuito del automóvil al que se encuentran conectados debe tener una capacidad superior a la de la suma de las capacidades de los fusibles de cada componente.
  Si ningún circuito del automóvil tiene una capacidad tan alta como la del fusible de la unidad, conecte ésta directamente a la batería.
  Si el automóvil no dispone de ningún circuito para conectar esta unidad, conéctela a un circuito con una capacidad superior a la del fusible de la unidad de tal manera que si se funde el fusible de ésta, no se cortará ningún otro circuito.

Si el automóvil no dispone de posición para accesorios en la llave de encendido — Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en reproducción. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil si **éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ⓑ y, después, presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en reproducción.

Nota

La alarma de precaución del panel frontal no se activará cuando el selector POWER SELECT se encuentre en la posición ⓑ.

Selector de frecuencia

El intervalo de sintonía de MW (FM) ha sido ajustado en fábrica a la posición 9K (50K). Si el sistema de asignación de frecuencias de su país se basa en el intervalo de 10kHz (200 kHz), ponga este selector, situado en la base de la unidad, en la posición 10K (200K) antes de realizar las conexiones.

線路之連接

注意

- 本機只能使用負極接地 12 V 直流電源。
- 連接以前，先拔取汽車電池的接地端子，以免發生短路。
- 紅色和黃色電源輸入導線必須等所有電線都連接完畢以後才連接。
- 紅色電源輸入導線需連接到汽車發動機點火鑰匙被轉在輔助位置時才通電狀態的正 12 V 電源端子。
- 所有地線都必須連接到同一地點才行。
- 將黃色導線連接到大於機器保險絲額定容量的汽車電路上。
  如果把本機和其他立體聲組成機車聯了，所連接的汽車電路容量必須大於各組成機保險絲容量的總和。
  如果沒有和機器保險絲額定容量一樣大的汽車電路可資利用，可把機器直接連接到電池上。
  若無適當的汽車電路可用於連接本機，請把機器連接到大於機器保險絲容量的汽車電路。如此，即使本機器的保險絲燒斷了，也不致於切斷其他電路。

若要在汽車發動機點火鑰匙開關沒具輔助位置的汽車裡使用時 — POWER SELECT 開關

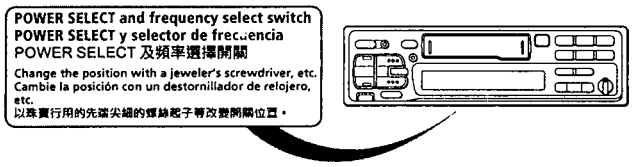
前板的照明燈在未出廠以前，被設定在即使不使用也會發亮的狀態。**若要在汽車發動機點火鑰匙開關沒具輔助位置的汽車裡使用本機的話，此照明燈將會一直消耗微量的汽車電池電力。因此為了避免在這種狀態下的電池消耗，請把本機底下的 POWER SELECT 開關設定在 ⓑ 之處，然後按壓前板的重調鍵。**則不使用本機時，照明燈便不發亮。

註

若您把 POWER SELECT（電源選擇）開關設定於ⓑ 位置時，前面板用的注意警告鈴不能被啟動。

頻率選擇開關

本裝置的 MW (FM) 調諧區間在出廠以前被設定在 "9 K (50 K)" 位置上。若貴地的頻率區間為 "10 kHz (200 kHz)"，連接以前需先把本機機底的選擇開關設定在 "10 K (200 K)" 之處。


POWER SELECT and frequency select switch
POWER SELECT y selector de frecuencia
POWER SELECT 及頻率選擇開關
Change the position with a jeweler's screwdriver, etc.
Cambie la posición con un destornillador de relojero, etc.
以珠寶行用的先端尖細的螺絲起子等改變開關位置。

When you change the position of the switch, be sure to press the reset button after the connections are complete.

Cuando haya cambiado la posición del selector, cerciórese de presionar el botón de reposición después de haber finalizado las conexiones.

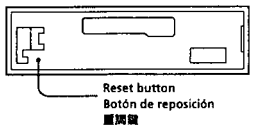
改變開關位置時，請一定在連接好機器後按下重調鍵。

Reset button

When the installation and connections are complete, be sure to press the reset button with a ball-point pen etc.

Botón de reposición

Cuando haya finalizado la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.



重調鍵

安裝和線路之連接完畢以後，請以圓珠筆等按壓重調鍵。取下前板時，則可看到重調鍵位於本機連接器左邊。

Connection diagram

Example 1
Ejemplo 1
例 1

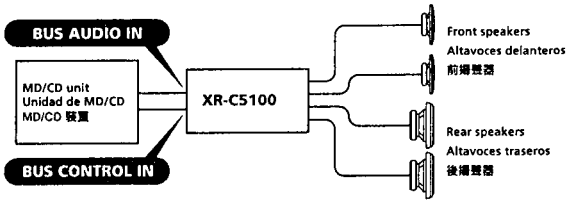
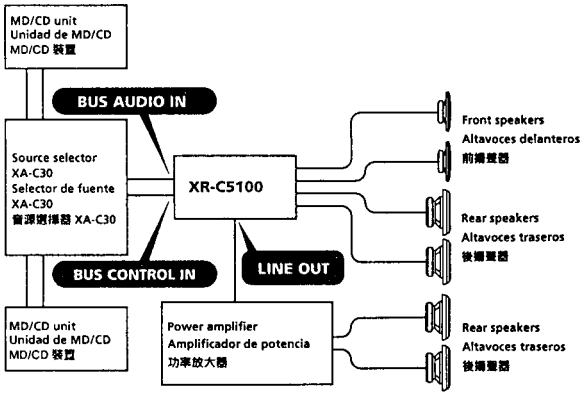


Diagrama de conexiones

Example 2
Ejemplo 2
例 2



Note

If you connect an optional power amplifier to the LINE OUT and do not use the built-in amplifier, the beep tone will be disabled.

Nota

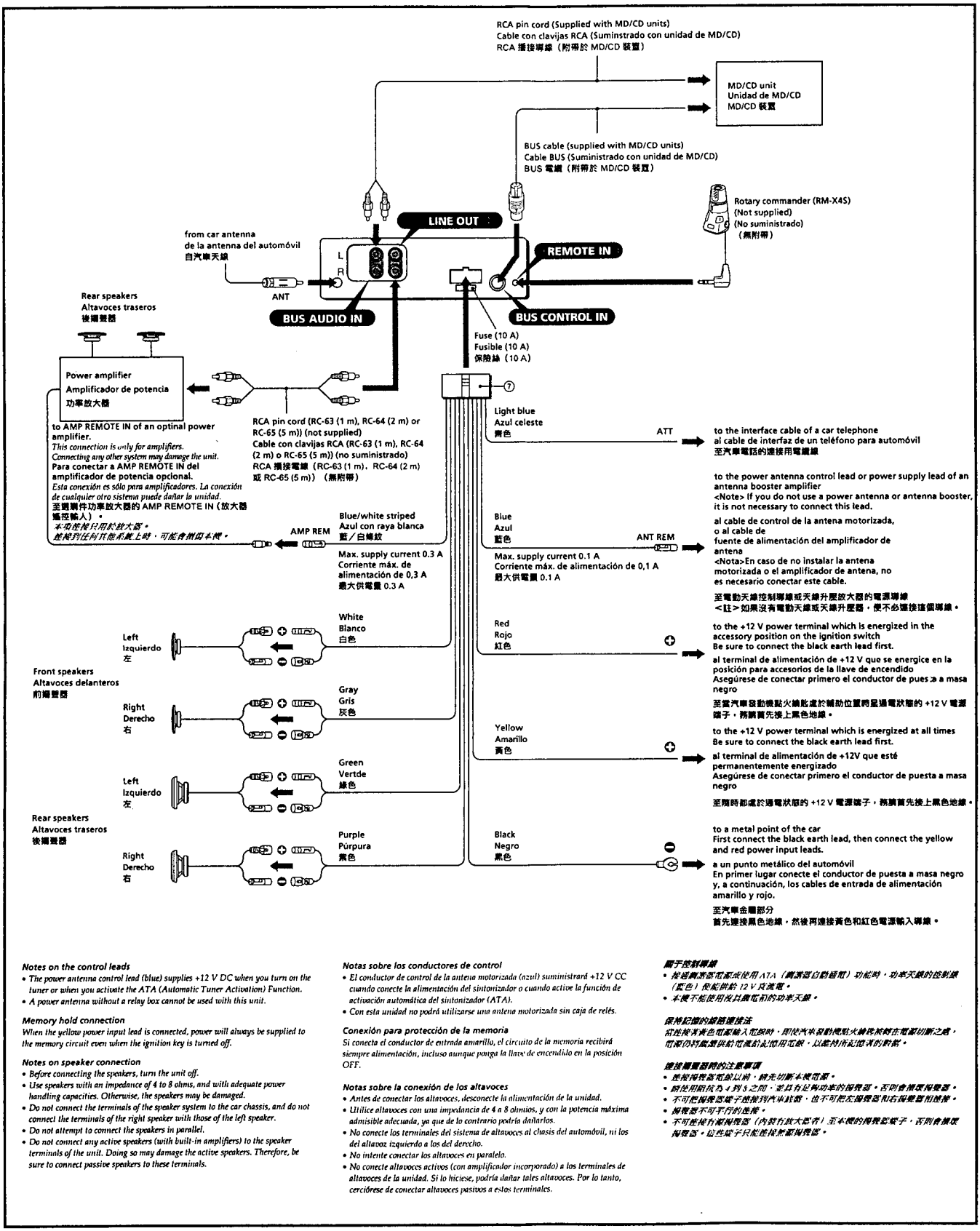
Si conecta un amplificador opcional de potencia a LINE OUT y no utiliza el incorporado, el pitido se desactivará.

註

如果在 LINE OUT 連接了一台選購件功率放大器而不用內裝的放大器，則將不發出嘟聲。

線路連接方塊圖

Connection example　　Ejemplo de conexiones　　線路之連接圖例


RCA pin cord (Supplied with MD/CD units)
Cable con clavijas RCA (Suminstrado con unidad de MD/CD)
RCA 插接導線（附帶於 MD/CD 裝置）
MD/CD unit
Unidad de MD/CD
MD/CD 裝置
BUS cable (supplied with MD/CD units)
Cable BUS (Suministrado con unidad de MD/CD)
BUS 電纜（附帶於 MD/CD 裝置）
Rotary commander (RM-X4S)
(Not supplied)
(No suministrado)
（無附帶）
LINE OUT
REMOTE IN
from car antenna
de la antena del automóvil
自汽車天線
ANT
BUS AUDIO IN
BUS CONTROL IN
Rear speakers
Altavoces traseros
後揚聲器
Fuse (10 A)
Fusible (10 A)
保險絲（10 A）
Power amplifier
Amplificador de potencia
功率放大器
to AMP REMOTE IN of an optinal power amplifier.
This connection is only for amplifiers.
Connecting any other system may damage the unit.
Para conectar a AMP REMOTE IN del amplificador de potencia opcional.
Esta conexión es sólo para amplificadores. La conexión de cualquier otro sistema puede dañar la unidad.
至選購件功率放大器的 AMP REMOTE IN（放大器遙控輸入）。
本功能僅只用於放大器。
連接到任何其他系統上時，可能會損毀本機。
RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
Cable con clavijas RCA (RC-63 (1 m), RC-64 (2 m) o RC-65 (5 m)) (no suministrado)
RCA 插接電線（RC-63 (1 m)、RC-64 (2 m) 或 RC-65 (5 m)）（無附帶）
Light blue
Azul celeste
青色
ATT
to the interface cable of a car telephone
al cable de interfaz de un teléfono para automóvil
至汽車電話的連接用電纜線
Blue/white striped
Azul con raya blanca
藍／白條紋
AMP REM
Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
最大供電量 0.3 A
Blue
Azul
藍色
ANT REM
Max. supply current 0.1 A
Corriente máx. de alimentación de 0,1 A
最大供電量 0.1 A
to the power antenna control lead or power supply lead of an antenna booster amplifier
<Note> If you do not use a power antenna or antenna booster, it is not necessary to connect this lead.
al cable de control de la antena motorizada, o al cable de fuente de alimentación del amplificador de antena
<Nota>En caso de no instalar la antena motorizada o el amplificador de antena, no es necesario conectar este cable.
至電動天線控制導線或天線升壓放大器的電源導線
<註>如果沒有電動天線或天線升壓器，便不必連接這個導線。
White
Blanco
白色
Left
Izquierdo
左
Front speakers
Altavoces delanteros
前揚聲器
Gray
Gris
灰色
Right
Derecho
右
Red
Rojo
紅色
to the +12 V power terminal which is energized in the accessory position on the ignition switch
Be sure to connect the black earth lead first.
al terminal de alimentación de +12 V que se energice en la posición para accesorios de la llave de encendido
Asegúrese de conectar primero el conductor de puesta a masa negro
至當汽車發動機點火鑰匙處於輔助位置時是通電狀態的 +12 V 電源端子，務請首先接上黑色地線。
Yellow
Amarillo
黃色
to the +12 V power terminal which is energized at all times
Be sure to connect the black earth lead first.
al terminal de alimentación de +12V que esté permanentemente energizado
Asegúrese de conectar primero el conductor de puesta a masa negro
至隨時都處於通電狀態的 +12 V 電源端子，務請首先接上黑色地線。
Green
Verde
綠色
Left
Izquierdo
左
Rear speakers
Altavoces traseros
後揚聲器
Purple
Púrpura
紫色
Right
Derecho
右
Black
Negro
黑色
to a metal point of the car
First connect the black earth lead, then connect the yellow and red power input leads.
a un punto metálico del automóvil
En primer lugar conecte el conductor de puesta a masa negro y, a continuación, los cables de entrada de alimentación amarillo y rojo.
至汽車金屬部分
首先連接黑色地線，然後再連接黃色和紅色電源輸入導線。

Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) Function.*
- *A power antenna without a relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Notas sobre los conductores de control

- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador o cuando active la función de activación automática del sintonizador (ATA).*
- *Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.*

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificador incorporado) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

關于控制導線

- *接通調諧器電源或使用 ATA（調諧器自動接收）功能時，功率天線的控制線（藍色）便能供給 12 V 直流電。*
- *本機不能使用沒具繼電箱的功率天線。*

保持記憶的線路連接法

若連接黃色電源輸入電線時，即使汽車發動機點火鑰匙將在電源切斷之處，電源仍將繼續供給電源記憶用電路，以維持所記憶資的數新。

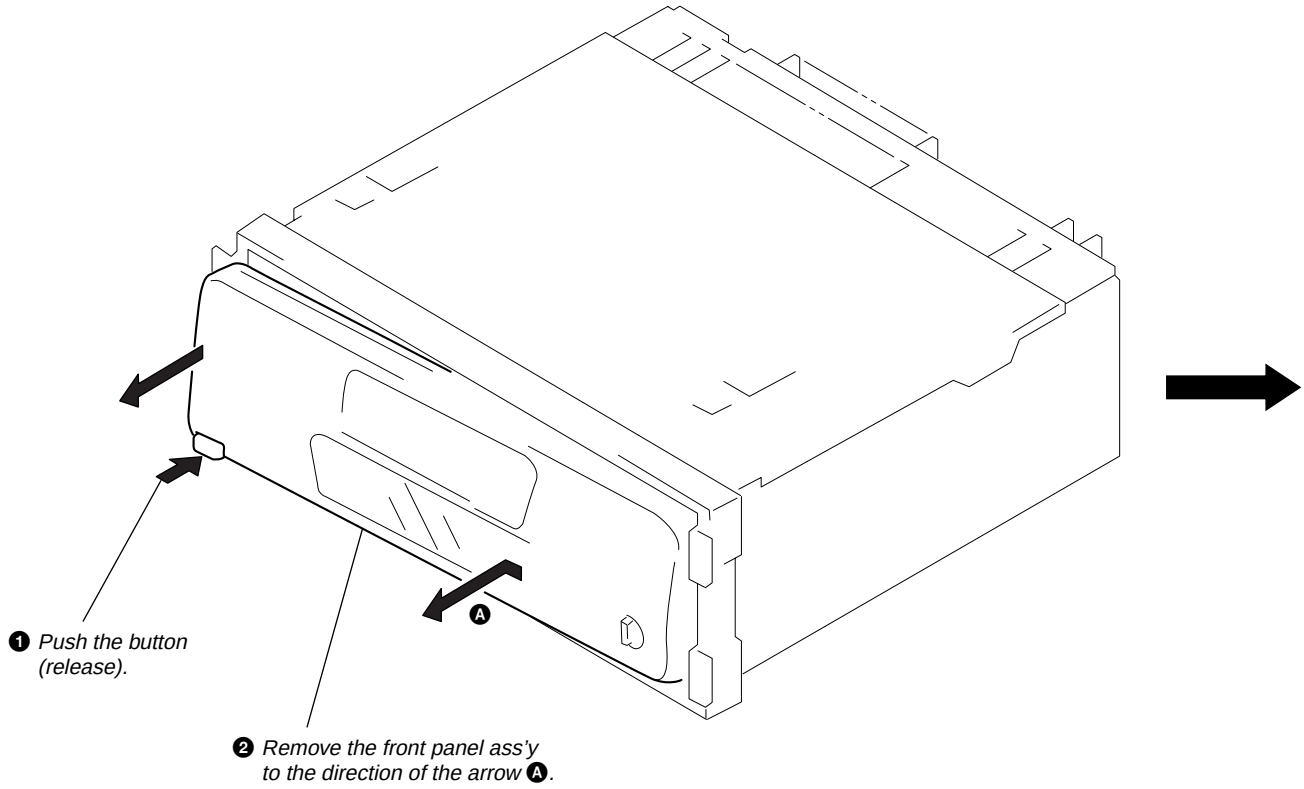
連接揚聲器時的注意事項

- *連接揚聲器電線以前，請先切斷本機電源。*
- *請使用阻抗為 4 到 8 之間，並具有足夠功率的揚聲器。否則會損壞揚聲器。*
- *不可把揚聲器端子連接到汽車底盤，也不可把左揚聲器和右揚聲器相連接。*
- *揚聲器不可平行的連接。*
- *不可連接有源揚聲器（內裝有放大器者）至本機的揚聲器端子，否則會損壞揚聲器。這些端子只能連接無源揚聲器。*

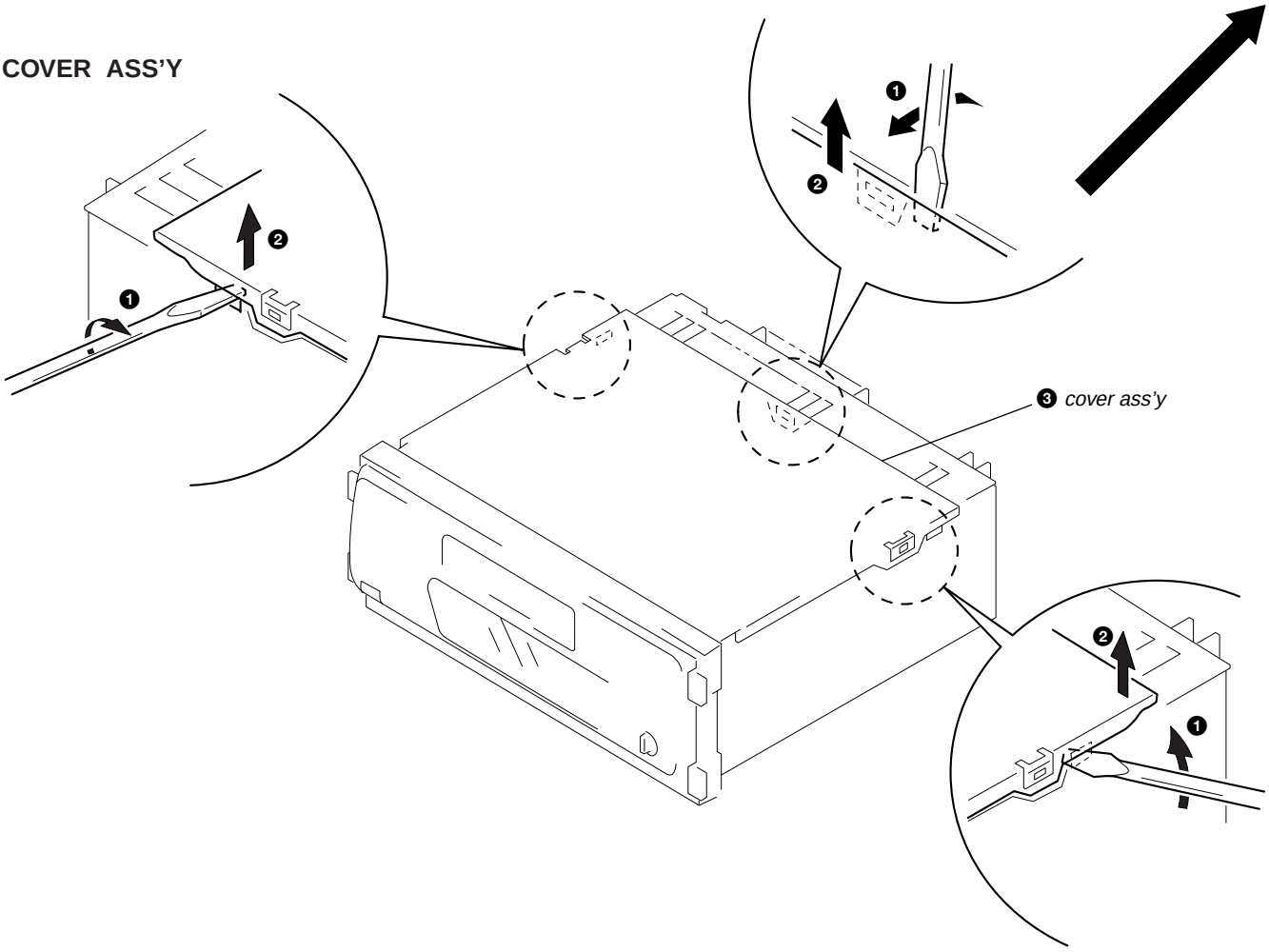
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

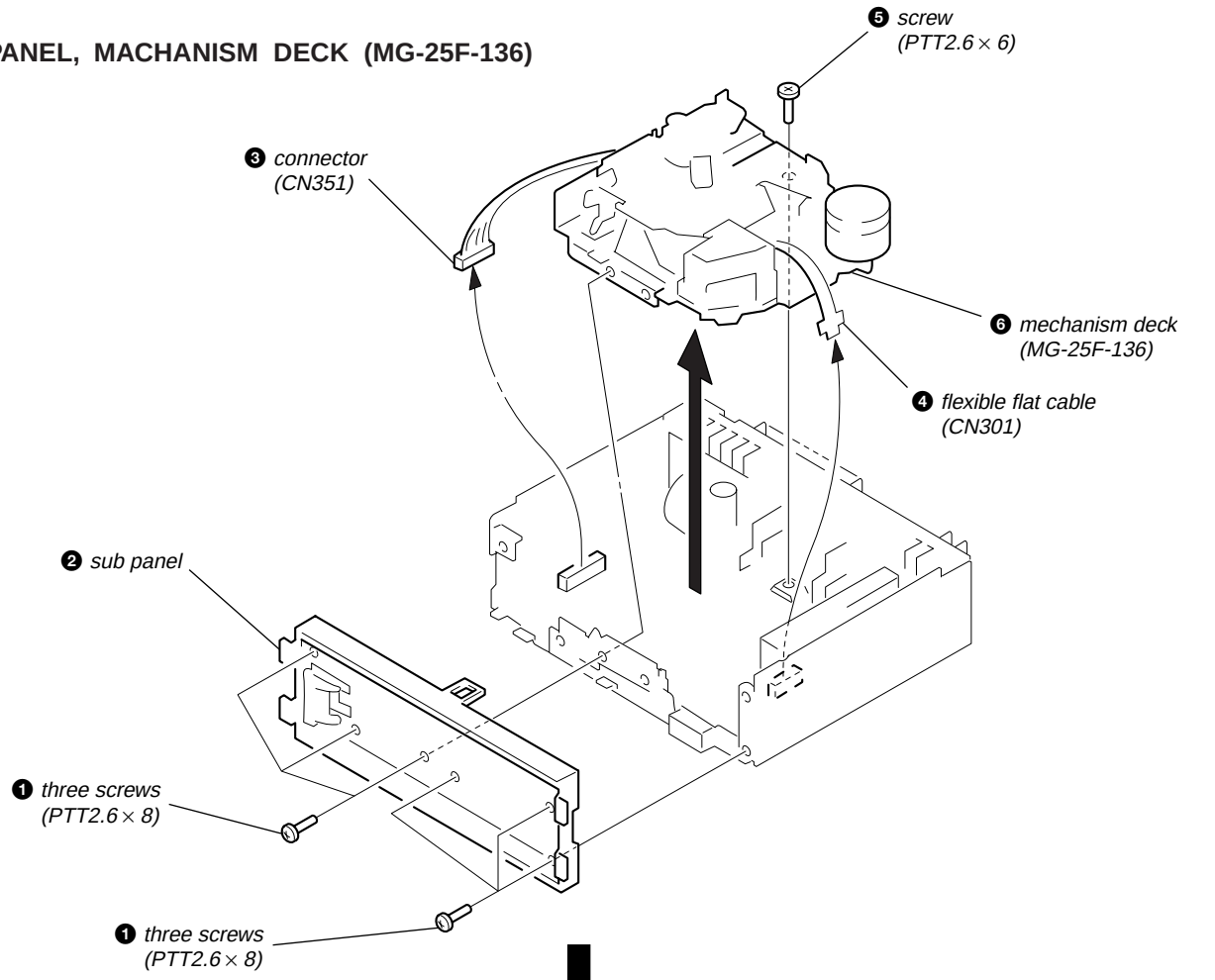
FRONT PANEL ASS'Y



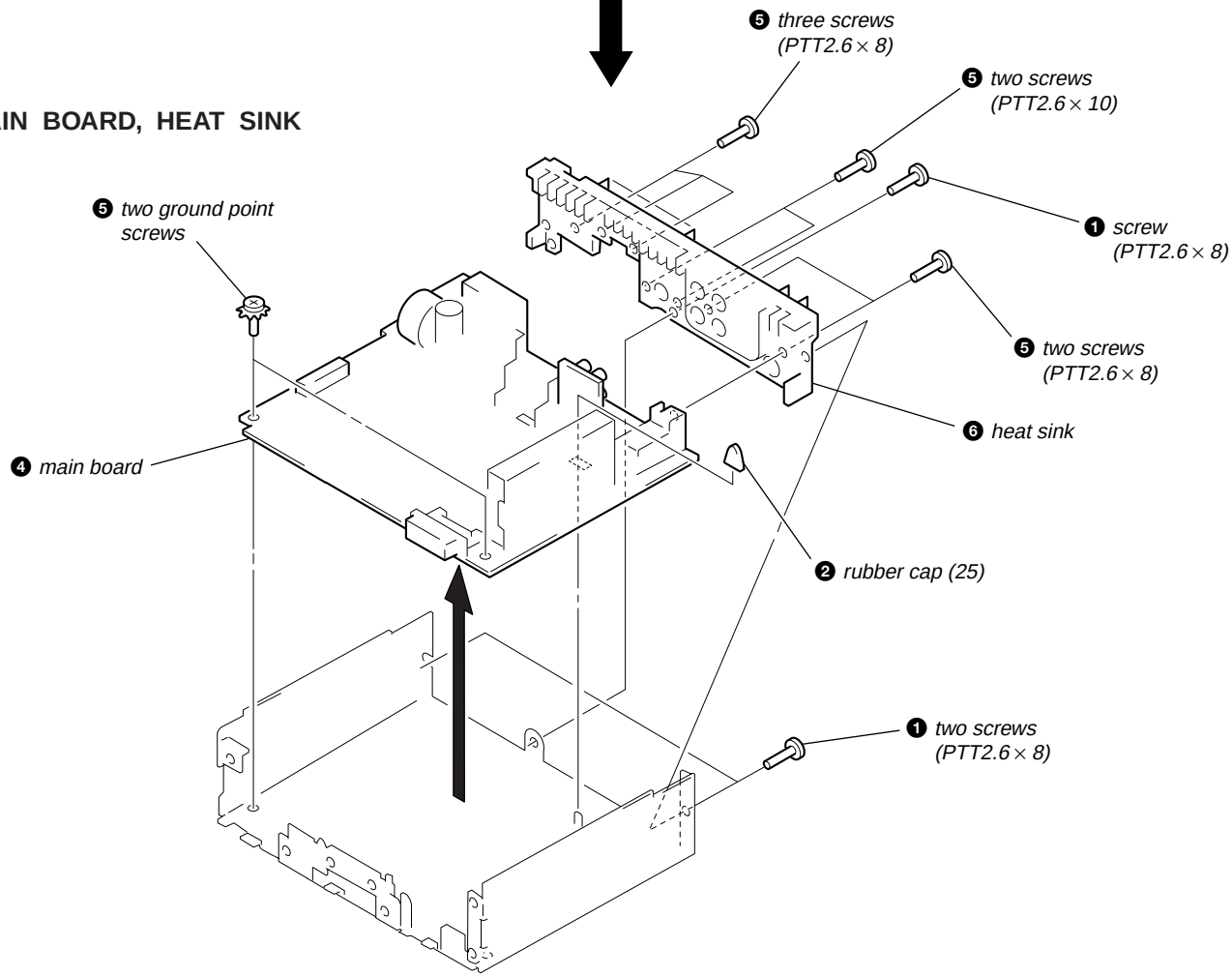
COVER ASS'Y



SUB PANEL, MACHANISM DECK (MG-25F-136)



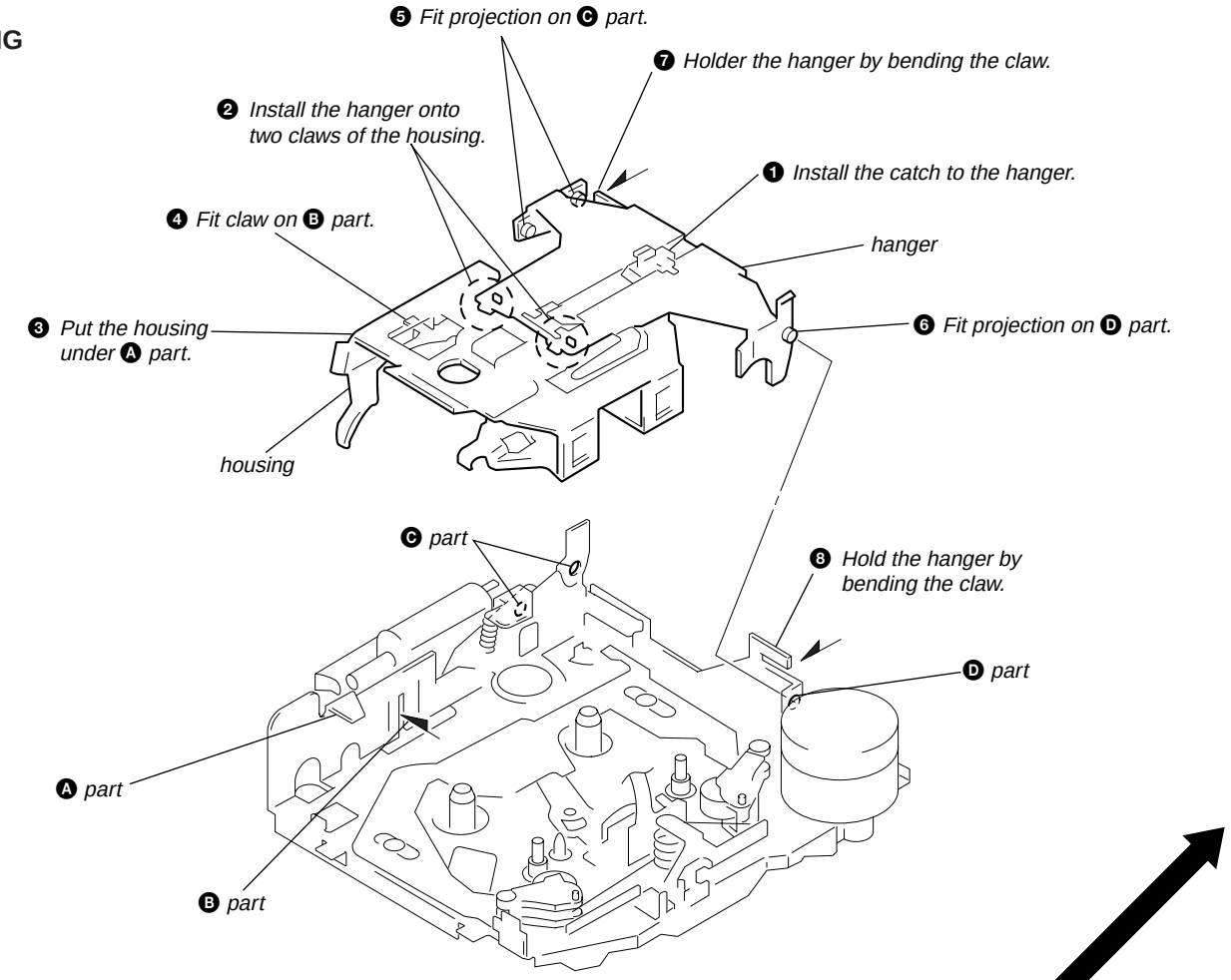
MAIN BOARD, HEAT SINK



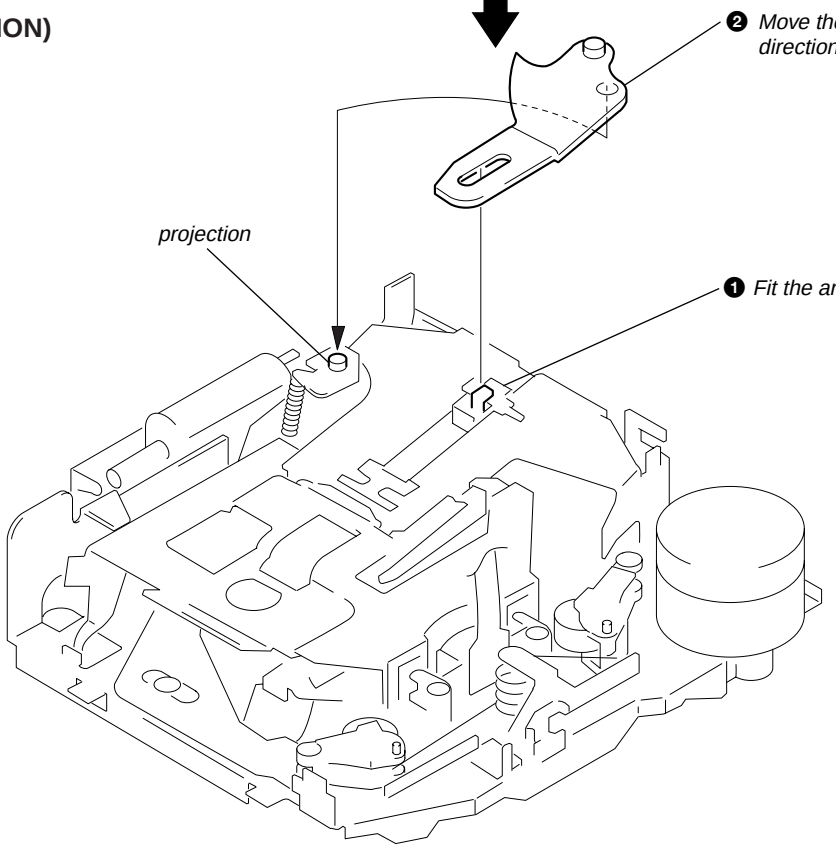
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note: Follow the assembly procedure in the numerical order given.

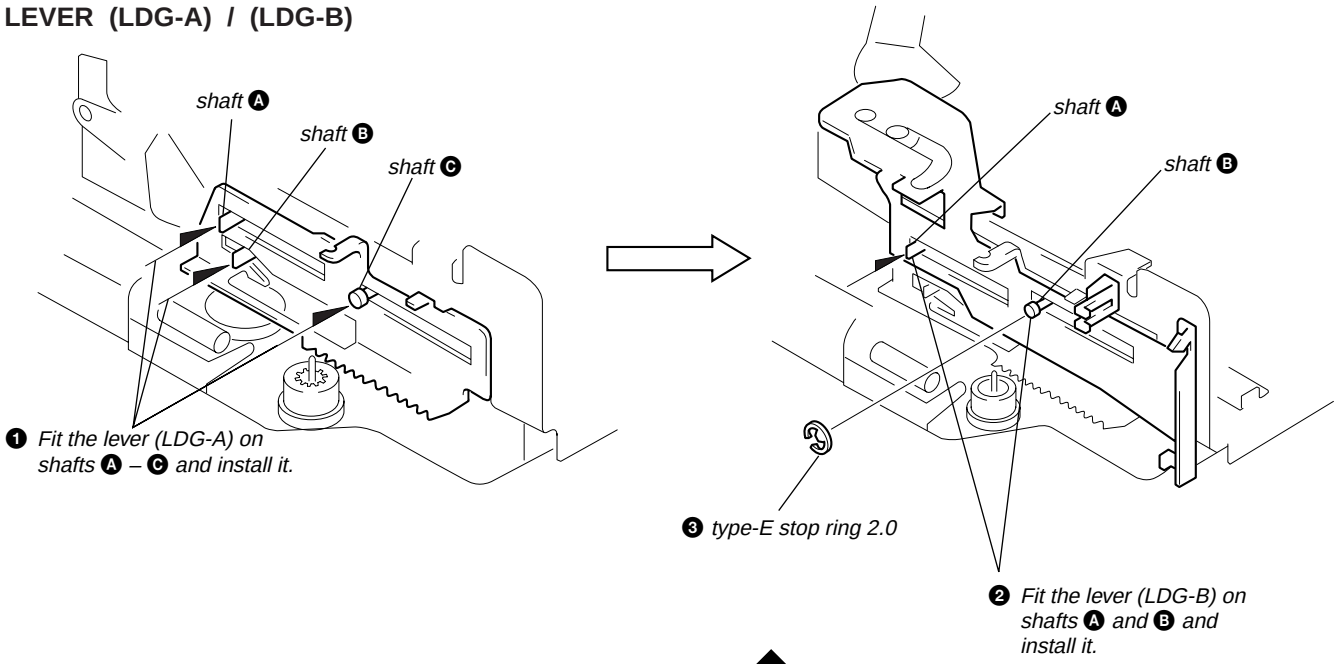
HOUSING


❺ Fit projection on Ⓒ part.
❼ Holder the hanger by bending the claw.
❷ Install the hanger onto two claws of the housing.
❶ Install the catch to the hanger.
❹ Fit claw on Ⓑ part.
hanger
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

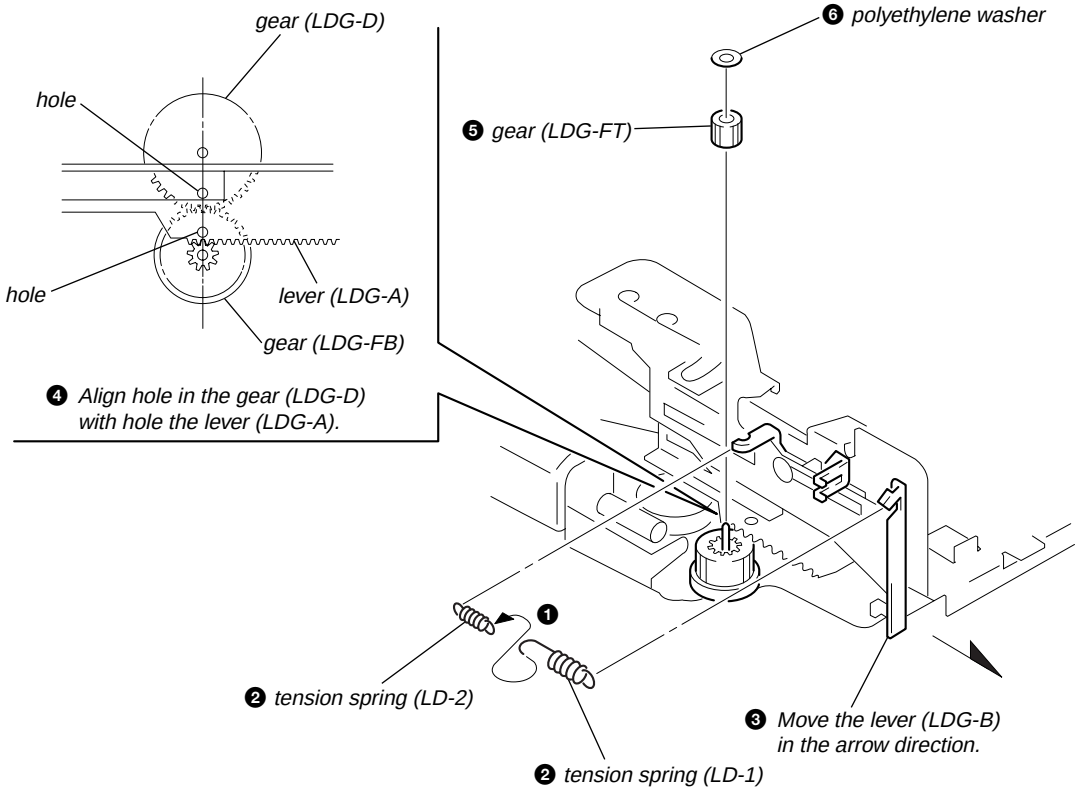
ARM (SUCTION)



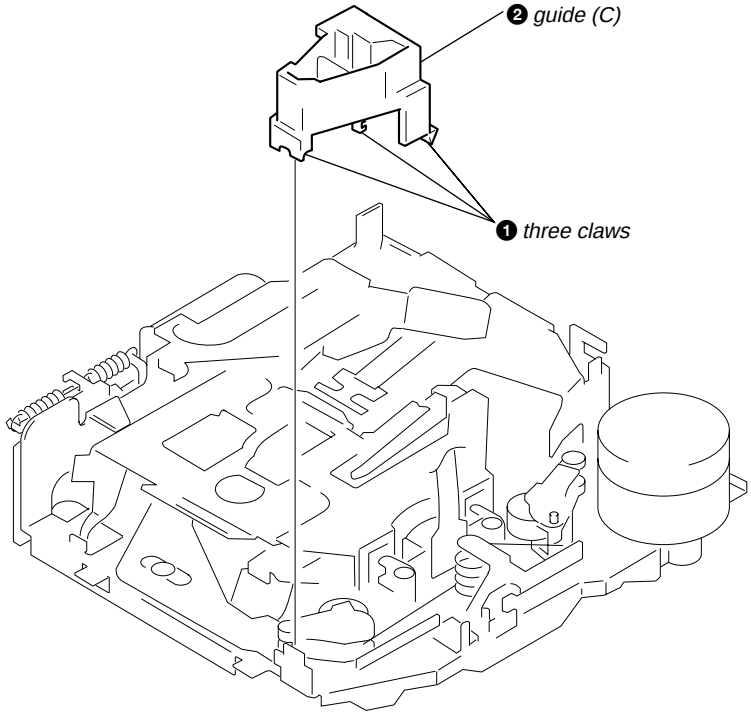
LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

GEAR (LDG-FT)



GUIDE (C)



SECTION 4
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	30 – 65 g•cm (0.42 – 0.90 oz·inch)
Forward Back Tension	CQ-102C	0.5 – 4.5 g•cm (0.01 – 0.06 oz·inch)
Reverse	CQ-102RC	30 – 65 g•cm (0.42 – 0.90 oz·inch)
Reverse Back Tension	CQ-102RC	0.5 – 4.5 g•cm (0.01 – 0.06 oz·inch)
FF, REW	CQ-201B	60 – 200 g•cm (0.83 – 2.78 oz·inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 90 g (more than 3.18 oz)
Reverse	CQ-403R	more than 90 g (more than 3.18 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM (MW) Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

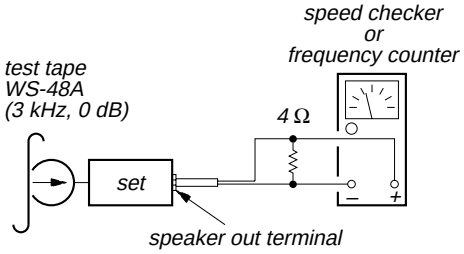
<Set the Test Mode>
1. Set the "power select" switch (S501) is "A (ON) " position.
2. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
   Note: Press the [OFF] button, if the clock is not displayed.
3. Push the preset [4] button.
4. Push the preset [5] button.
5. Press the preset [1] button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test mode>
1. Push the [OFF] button.
2. Return the "power select" switch (S501) to initially set position.

See the adjustment location from on page 16 for the adjustment.

TAPE DECK SECTION | 0 dB=0.775 V

Tape Speed Adjustment
Setting:



Procedure:
1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification: Constant speed

Speed checker	Frequency counter
–1.5 to +2.5%	2,955 to 3,075 Hz

Adjustment Location: See page 16.

TUNER SECTION (E model only)

US/Canadian model, a tuner section is no adjustment.

0 dB=1 µV

Cautions during repair

When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

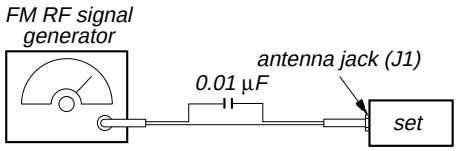
Note: Adjust the tuner section in the sequence shown below.

1. FM Auto Scan/Stop Level Adjustment
2. FM Noise Focus Adjustment
3. FM Stereo Separation Adjustment
4. AM (MW) Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting:

SOURCE button: FM
FREQUENCY SELECT switch: FM 200 k

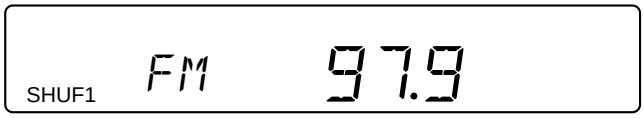


Carrier frequency : 97.9 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure:

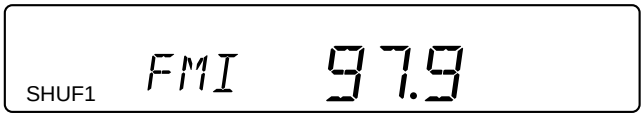
1. Set to the test mode. (See page 14.)
2. Push the SOURCE button and set to FM.

Display



3. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FMI" indication on the display window.
   But, in case of already indicated "FMI", turn the RV2 so that put out light "I" indication and adjustment.

Display

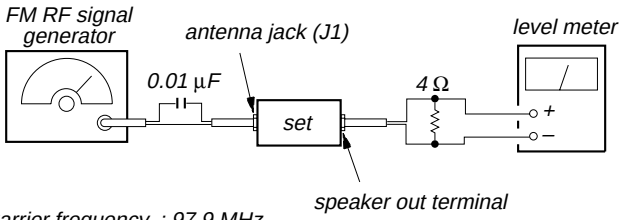


Adjustment Location: See page 16.

FM Noise Focus Adjustment

Setting:

SOURCE button: FM
FREQUENCY SELECT switch: FM 200 k



Carrier frequency : 97.9 MHz
Output level : 60 dB (1 mV)
Mode : stereo
Modulation : 1 kHz, 75 kHz deviation (100%)

Procedure:

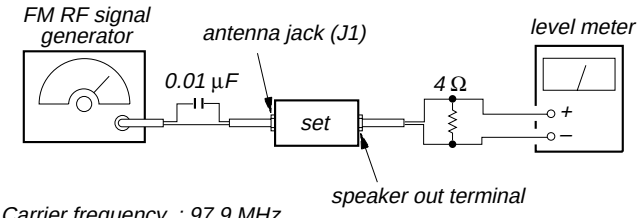
1. Tune the 97.9 MHz.
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV3 on TU1 so that the output level is (A) –32 ± 2 dB then signal generator input set to –20 dB.

Adjustment Location: See page 16.

FM Stereo Separation Adjustment

Setting:

SOURCE button: FM
FREQUENCY SELECT switch: FM 200 k



Carrier frequency : 97.9 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main: 1 kHz, 33.75 kHz deviation (45%)
sub: 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

Specification: Separation more than 28 dB

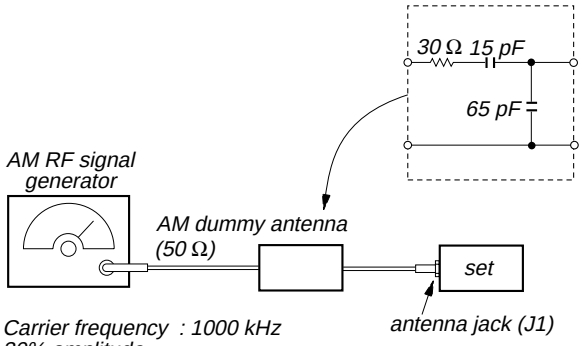
Adjustment Location: See page 16.

AM (MW) Auto Scan/Stop Level Adjustment

Make this adjustment after "FM Auto Scan/Stop Level Adjustment".

Setting:

SOURCE and MODE button: MW
FREQUENCY SELECT switch: MW 10 k



Carrier frequency : 1000 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

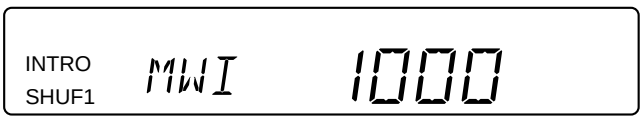
Procedure:

1. Set to the test mode. (See page 14.)
2. Push the SOURCE button and set to FM.
3. Push the MODE button and set to MW.

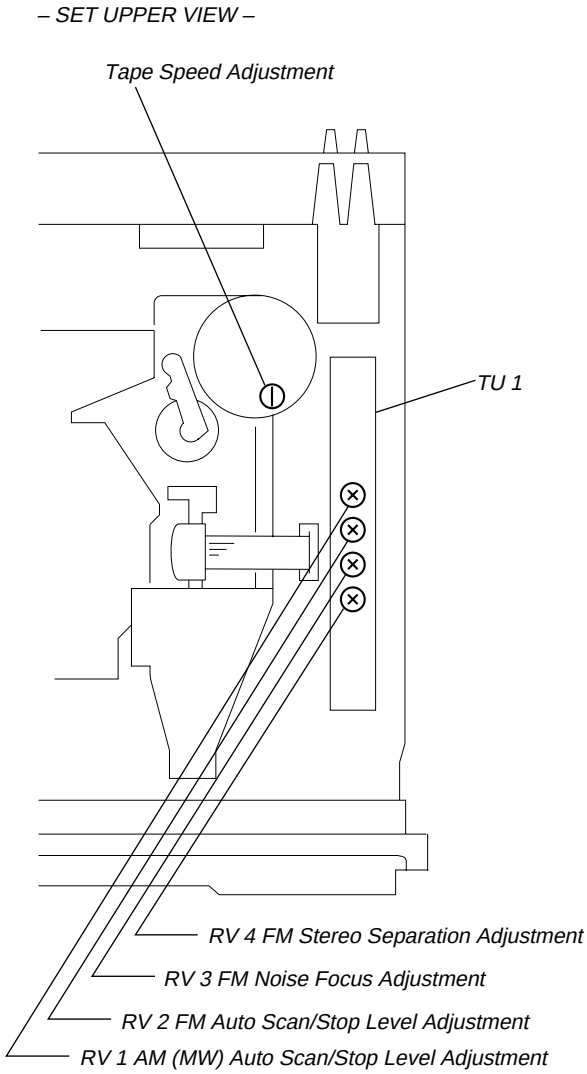
Display

4. Adjust with the volume RV1 on TU1 so that the "MW" indication turns to "MWI" indication on the display window.
   But, in case of already indicated "MWI", turn the RV1 so that put out light "I" indication and adjustment.

Display



Adjustment Location:


– SET UPPER VIEW –
Tape Speed Adjustment
TU 1
RV 4 FM Stereo Separation Adjustment
RV 3 FM Noise Focus Adjustment
RV 2 FM Auto Scan/Stop Level Adjustment
RV 1 AM (MW) Auto Scan/Stop Level Adjustment

SECTION 6
DIAGRAMS

6-1. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 μPD17708GC-567-3B9 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	AMSSEL	I	Setting terminal for the AMS selection fixed at "L"
2	POS3	I	Tape position detect input from tape operation switch on the mechanism block
3	POS2	I	
4	POS0	I	
5	POS1	I	
6	TAPEON	O	Tape system power supply on/off control signal output terminal "H": tape on
7	CM ON	O	Capstan/reel motor (M901) drive signal output terminal "H": motor on
8	LM LOD	O	Loading/tape operation motor control signal output to the LB1638M (IC351) (For the loading direction and forward side operation) *1
9	LM EJ	O	Loading/tape operation motor control signal output to the LB1638M (IC351) (For the eject direction and reverse side operation) *1
10	TUNON	O	Tuner system power supply on/off control signal output to the BA3918 (IC611) "H": tuner on
11	FM ON	O	FM system power supply on/off control signal output to the BA3918 (IC611) "H": FM on
12	PW ON	O	Main system power supply on/off control signal output to the BA3918 (IC611) "H": power on
13	MUT	O	Line muting control signal output terminal "H": line muting on
14	VOLCE	O	Chip enable signal output to the electrical volume (IC331)
15	VOLCKO	O	Serial data transfer clock signal output to the electrical volume (IC331)
16	VOLSO	O	Serial data output to the electrical volume (IC331)
17	AMPON	O	Standby control signal output to the power amplifier (IC751) "L": standby
18	$\overline{\text{AMPMUT}}$	O	Muting control signal output to the power amplifier (IC751) "L": muting on
19	$\overline{\text{DX/LO}}$	O	Local/DX selection signal output to the FM/AM tuner unit (TU1) "L": DX, "H": local
20	$\overline{\text{AM MONO}}$	O	AM forced monaural signal output terminal Not used (open)
21	GND	—	Ground terminal
22	DSTSEL	I	Destination setting terminal US, Canadian models: fixed at center voltage E model: frequency select switch (S502) input "L": AM 9k step or FM 50k step, "H": AM 10k step or FM 200k step
23	DBASIN	I	D-BASS switch (SW951) input (A/D input)
24	KEYIN1	I	Key input terminal (A/D input) ⏏, INTRO 1, REPEAT 2, SHUF 3, BL SKIP 6, ATA 5, 4, PRESET DISC +/– keys input (LSW921 to LSW927, LSW929 and LSW930)
25	KEYIN0	I	Key input terminal (A/D input) OFF, SOURCE, MODE ◀II▶, + ▶▶ ▶▶I SEEK AMS, – I◀◀ ◀◀ SEEK AMS, VOLUME –, SEL, VOLUME +, ATT , DSPL, BTM, LCL keys input (LSW901 to LSW912)
26	RC IN0	I	Rotary remote commander shift key A/D input terminal
27	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1)
28	AMIFIN	I	AM intermediate frequency detection signal input from the FM/AM tuner unit (TU1)
29	FMIFIN	I	FM intermediate frequency detection signal input from the FM/AM tuner unit (TU1)
30	VDD2	—	Power supply terminal (+5V)
31	FM OSC	I	FM local oscillator detection signal input from the FM/AM tuner unit (TU1)
32	AM OSC	I	AM local oscillator detection signal input from the FM/AM tuner unit (TU1)
33	GND	—	Ground terminal
34	NCO	O	Not used (open)
35	EO1	O	Main charge-pump control signal output terminal
36	TEST0	I	Setting terminal for the test (fixed at "L")
37	NCO	O	Not used (open)
38	$\overline{\text{SEKOUT}}$	O	Seek control signal output to the FM/AM tuner unit (TU1)

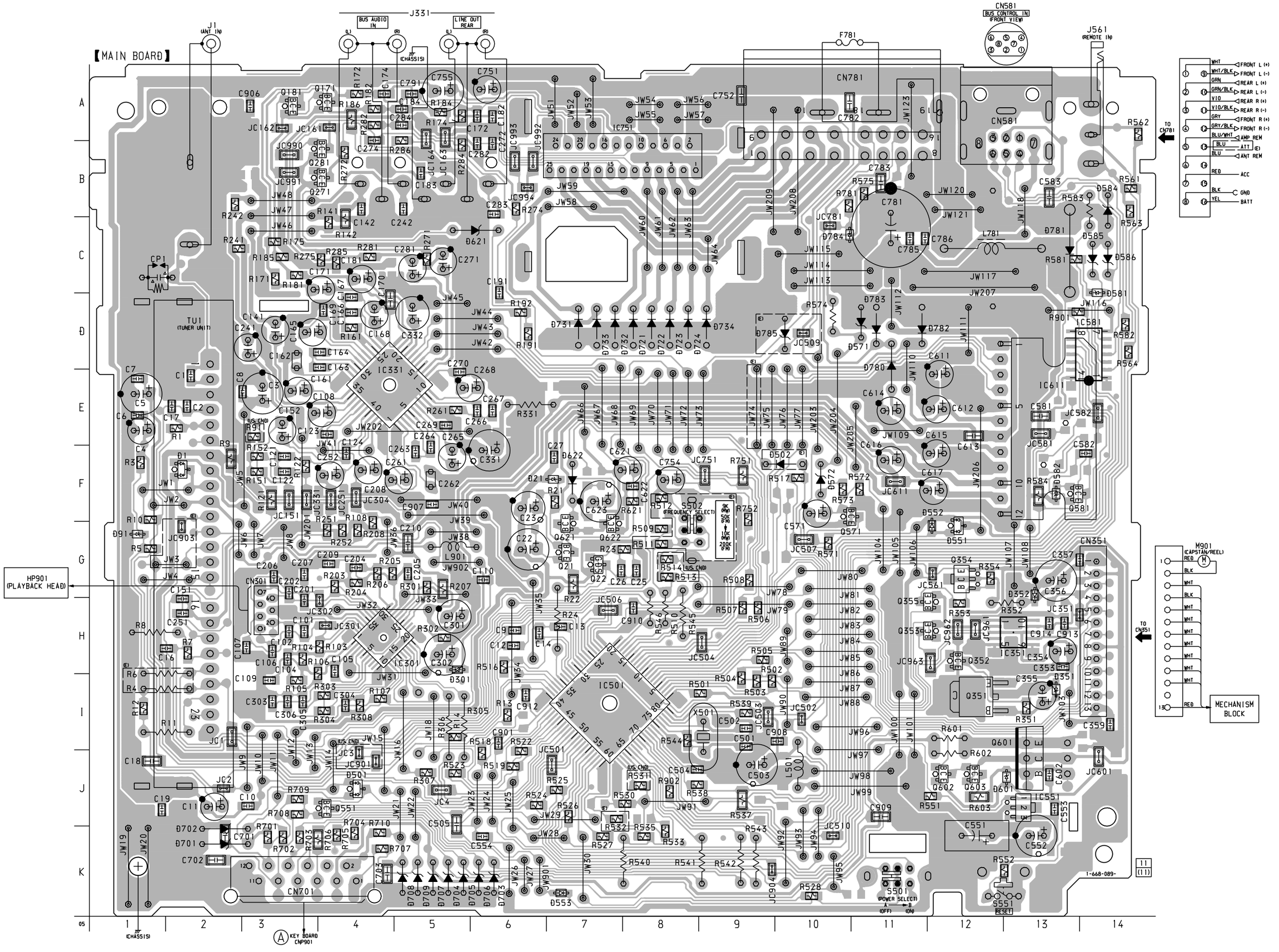
Pin No.	Pin Name	I/O	Function
39	$\overline{\text{MW/SW}}$	O	MW/SW selection signal output to the FM/AM tuner unit (TU1) "L": MW, "H": SW Used for the E mode
40	BEEP	O	Beep sound output terminal
41	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "L"
42	BU IN	I	Battery detect signal input terminal "H": battery on
43	MTLSEL	I/O	METAL control in/out terminal At initial mode: auto/manual mode selection input of METAL function "L": manual mode At manual mode: METAL on/off control signal output terminal ("H" output: METAL on) At auto mode: input at $\overline{\text{MTLIN}}$ (pin ⑤⑨) Not used this function in this set (fixed at "H")
44	DOLON	I/O	Dolby control in/out terminal At initial mode: valid/invalid selection input of dolby function ("L" input: valid) At normal mode: dolby on/off control signal output ("H" output : dolby on) Not used this function in this set (fixed at "H")
45	$\overline{\text{AMSIN}}$	I	Whether a music is present or not from CXA2509AQ (IC301) is detected at auto music sensor "L": music is present, "H": music is not present
46	$\overline{\text{ST}}$	I/O	Input of FM stereo detection signal from FM/AM tuner unit (TU1), and output of forced monaural control signal to FM/AM tuner unit (TU1) (Commonly used for stereo display input and forced monaural output) FM stereo detection at input of "L", forced monaural at output of "L"
47	$\overline{\text{AMS ON}}$	O	Tape auto music sensor control signal output to the CXA2509AQ (IC301) "L" is output to lower the gain for audio level at FF/REW
48	$\overline{\text{N}}$/R OUT	O	Forward/reverse direction control signal output to the CXA2509AQ (IC301) "L: forward direction, "H": reverse direction
49	TAPMUT	O	Tape muting on/off control signal output to the CXA2509AQ (IC301) "H": tape muting on
50	ILLON	O	Power supply on/off control signal output terminal at the illumination and liquid crystal display driver (IC901) "H": power on At power select switch (S501) on mode: "H" output at the accessory on At power select switch (S501) off mode: "H" output at the power on
51	SD IN	I	Station detector detect input from the FM/AM tuner unit (TU1) Stop level for SEEK, BTM, etc. is determined SD is present at input of "H"
52	$\overline{\text{NOSESW}}$	I	Detects the removal of the attaching and removing type front panel block "L": attaching
53	$\overline{\text{TELMUT}}$	I	Telephone muting signal input terminal At input of "L", the signal is attenuated by –20 dB Used for the E model
54	REL T	I	Reel table rotation detect signal input from the take-up and supply reel sensor
55	$\overline{\text{ACCIN}}$	I	Accessory detect signal input terminal "L": accessory on
56	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode "L": test mode (normally fixed at "H")
57	RC IN1	I	Rotary remote commander shift key A/D input terminal
58	PW SEL	I	Power select switch (S501) input terminal "L": position A (halt mode), "H": position B (operation mode)
59	$\overline{\text{MTLIN}}$	I	Input terminal to set whether the auto metal function is present or not "L": auto metal function is present (fixed at "H")
60	ADON	O	Power supply on/off control signal output for the A/D conversion
61	KEYSEL	I	Setting terminal for the key (fixed at "H")
62	SEKOUTSEL	I	Active selection terminal for the $\overline{\text{SEKOUT}}$ (pin ㊳) (US, Canadian models: fixed at "H", E model: fixed at "L")
63	COLORSEL	I	Setting terminal for the illumination color "L": amber, "H": green (fixed at "H")
64	LCDCE	O	Chip enable output to the liquid crystal display driver (IC901)
65	LCDCKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC901)

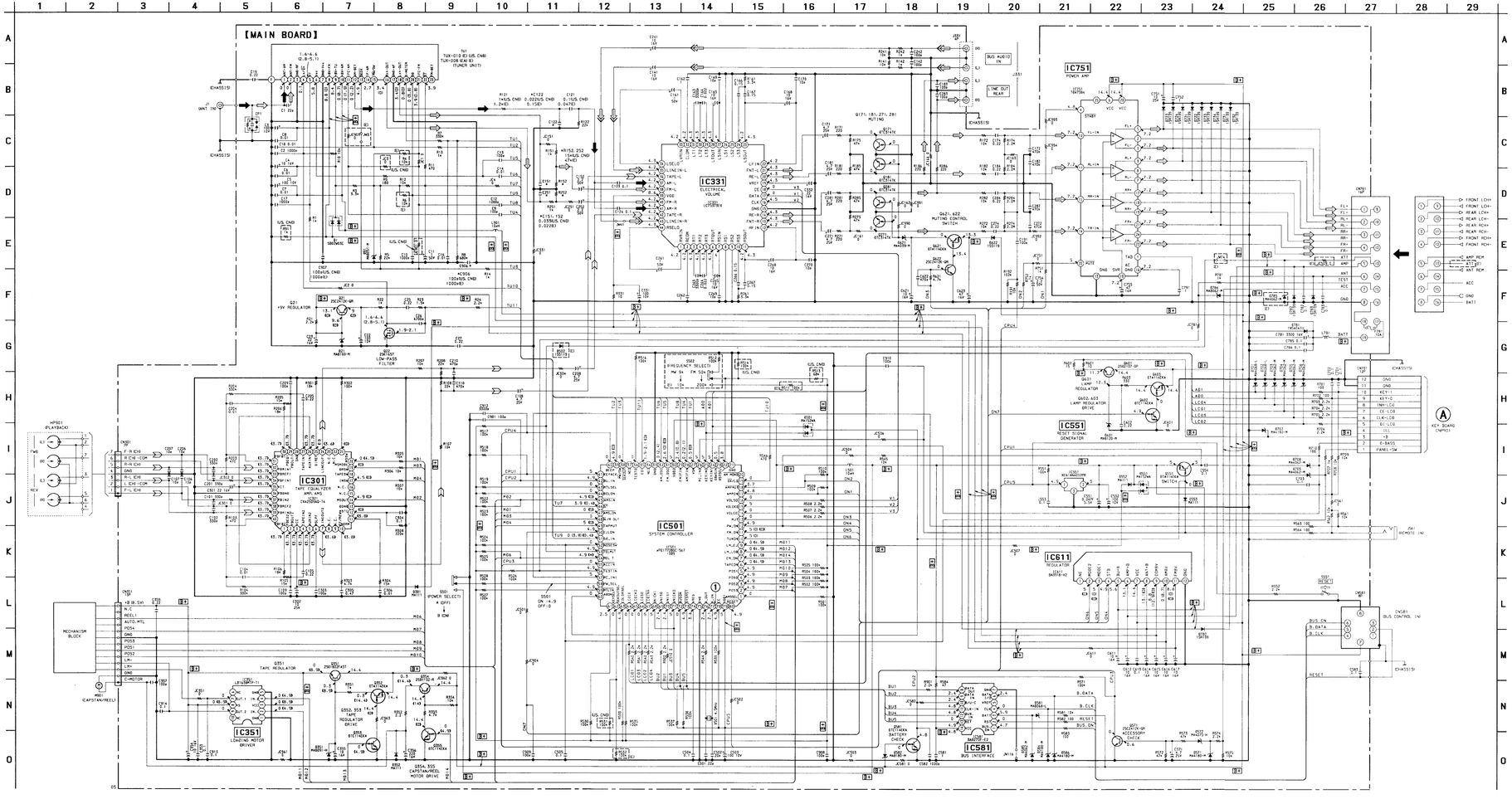
Pin No.	Pin Name	I/O	Function
66	LCDSO	O	Serial data output to the liquid crystal display driver (IC901)
67	$\overline{\text{LCDINH}}$	O	Blank indicate control signal output to the liquid crystal display driver (IC901) "L": no display
68	UNICKI	I	Serial data reading clock signal input terminal (for SONY bus)
69	UNISO	O	Serial data output to the bus interface (IC581) (for SONY bus)
70	UNISI	I	Serial data input from the bus interface (IC581) (for SONY bus)
71	UNICKO	O	Serial data transfer clock signal output to the bus interface (IC581) (for SONY bus)
72	$\overline{\text{BUSON}}$	O	Bus on/off control signal output to the bus interface (IC581) (for SONY bus) "L": bus on
73	$\overline{\text{SYSRST}}$	O	Reset signal output to the bus interface (IC581) (for SONY bus) "L": reset
74	VREG	O	CPU regulator output terminal Connected to capacitor
75	GND	—	Ground terminal
76	X OUT	O	Main system clock output terminal (4.5 MHz)
77	X IN	I	Main system clock input terminal (4.5 MHz)
78	CE	I	CPU chip enable signal input (fixed at "H")
79	VDD1	—	Power supply terminal (+5V)
80	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC551) and reset switch (S551) "L" is input for several 100 msec after power on, then it changes to "H"

*1 loading/tape operation motor control

MODE / TERMINAL	STOP	LOADING/ FORWARD	EJECT/ REVERSE	BRAKE
LM LOD (pin ⑧)	"L"	"H"	"L"	"H"
LM EJ (pin ⑨)	"L"	"L"	"H"	"H"

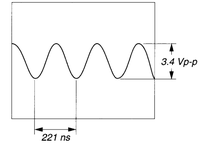
6-2. PRINTED WIRING BOARD – MAIN Section –





• **Waveform**

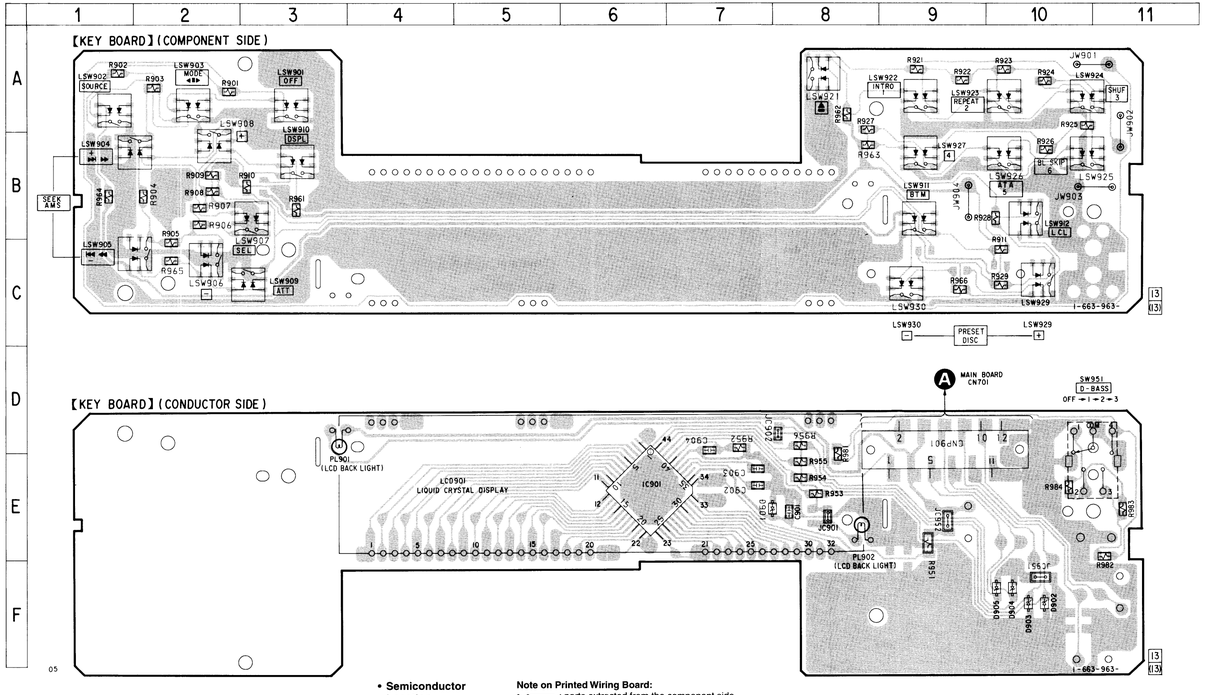
❶ IC501 ⑰ (X_IN)



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM (MW)
  ⟨⟨ ⟩⟩ : TAPE PLAYBACK
  ✳ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW)
  ⇩ : TAPE PALYBACK
  ⇛ : BUS AUDIO IN

6-4. PRINTED WIRING BOARD – PANEL Section –



• Semiconductor Location

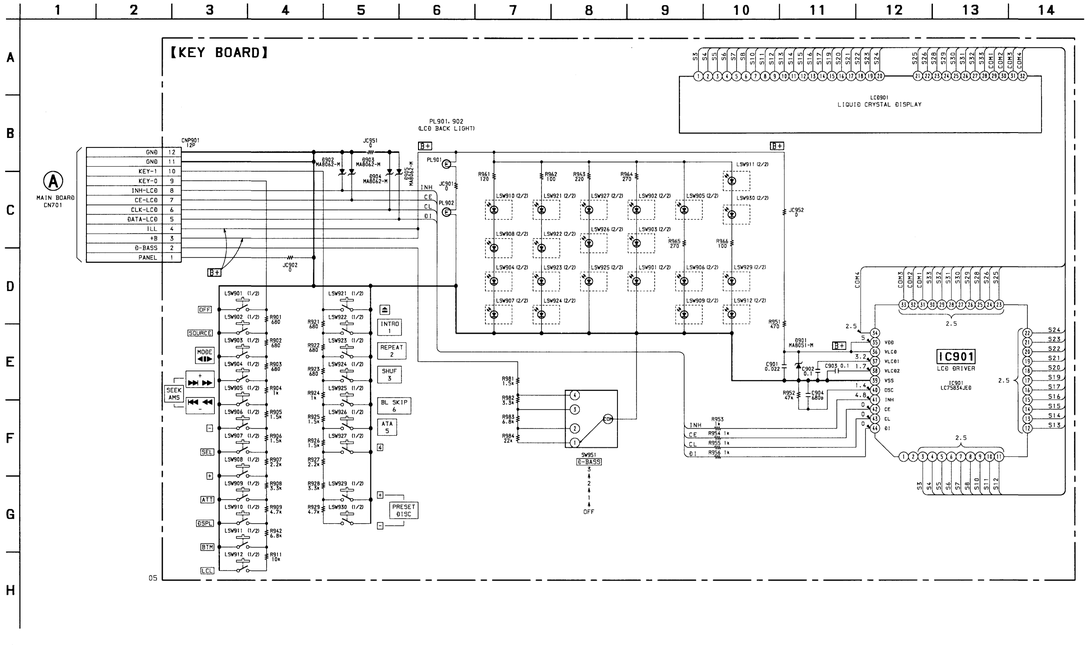
Ref. No.	Location
D901	E-7
D902	F-10
D903	F-10
D904	F-10
D905	F-10
IC901	E-6

Note on Printed Wiring Board:
- ○——: parts extracted from the component side.
- ▒▒▒: Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:
Pattern face side: (Conductor Side) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side) Parts on the parts face side seen from the parts face are indicated.

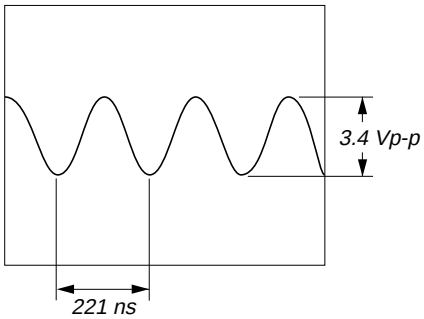
6-5. SCHEMATIC DIAGRAM – PANEL Section –



Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- [ ] : panel designation.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.

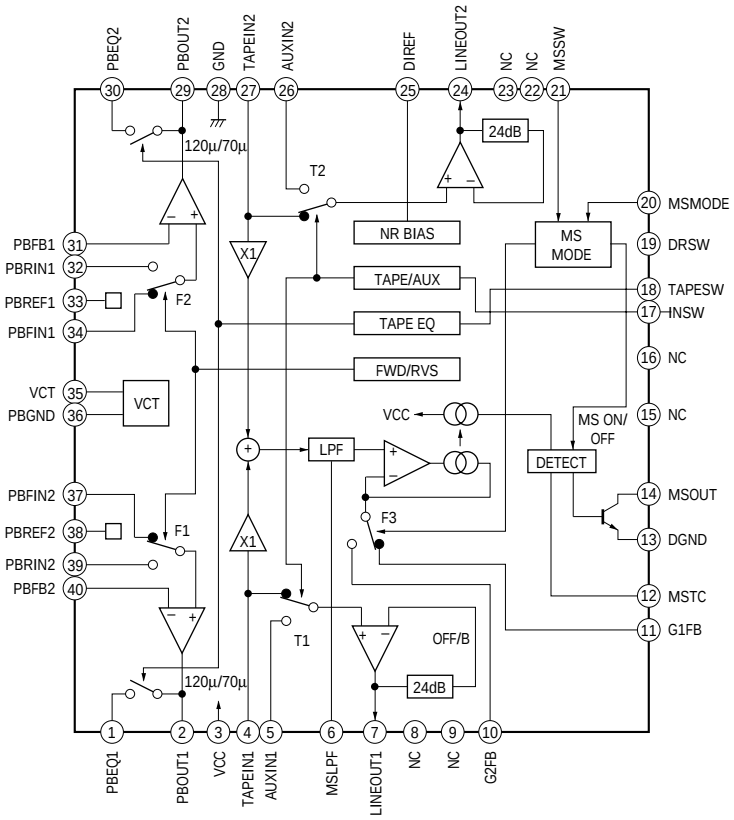
• **Waveform**

❶ IC501 ⑰ (X_IN)

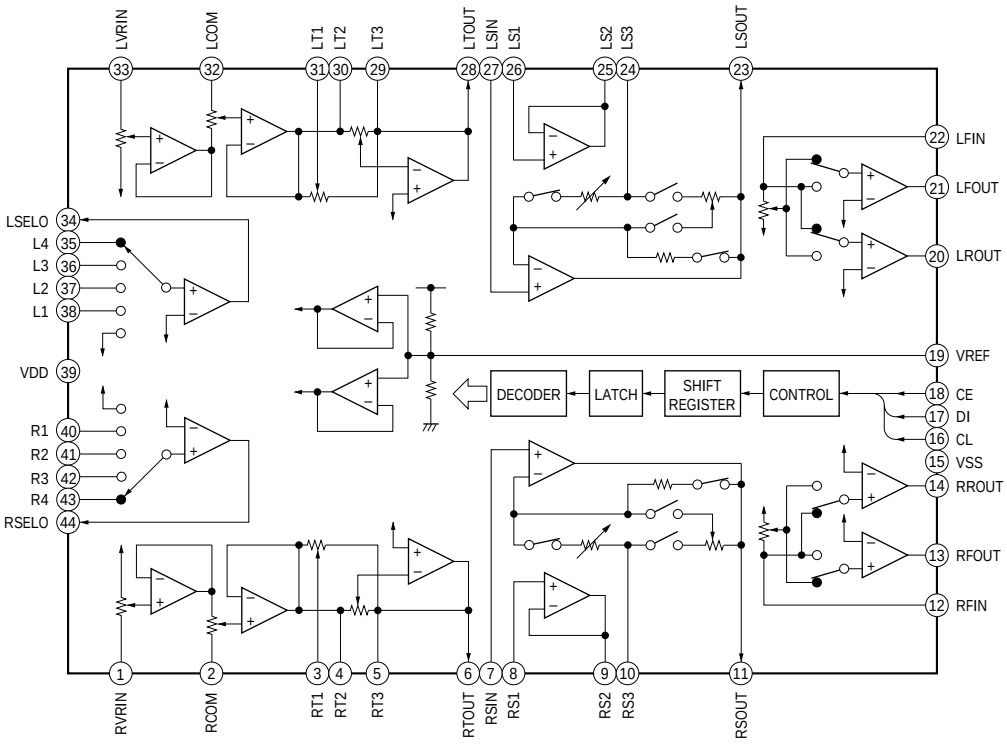


• IC Block Diagrams – MAIN Board –

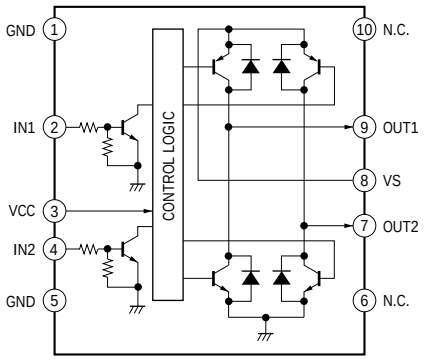
IC301 CXA2509AQ-T4



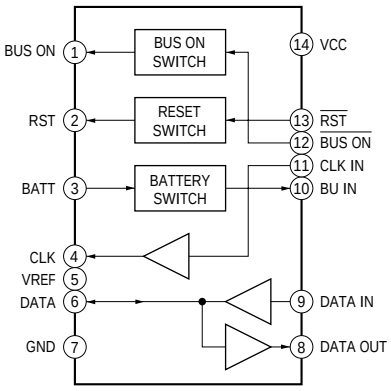
IC331 LC75373ED



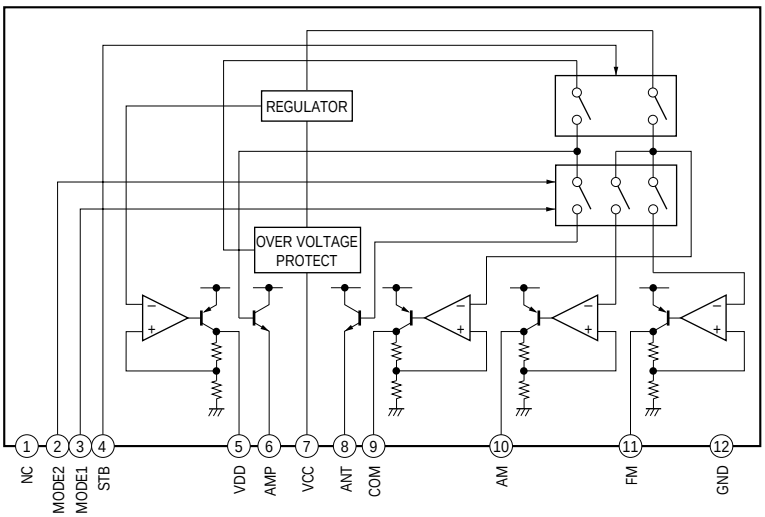
IC351 LB1638M



IC581 BA8270F-E2



IC611 BA3918-V2

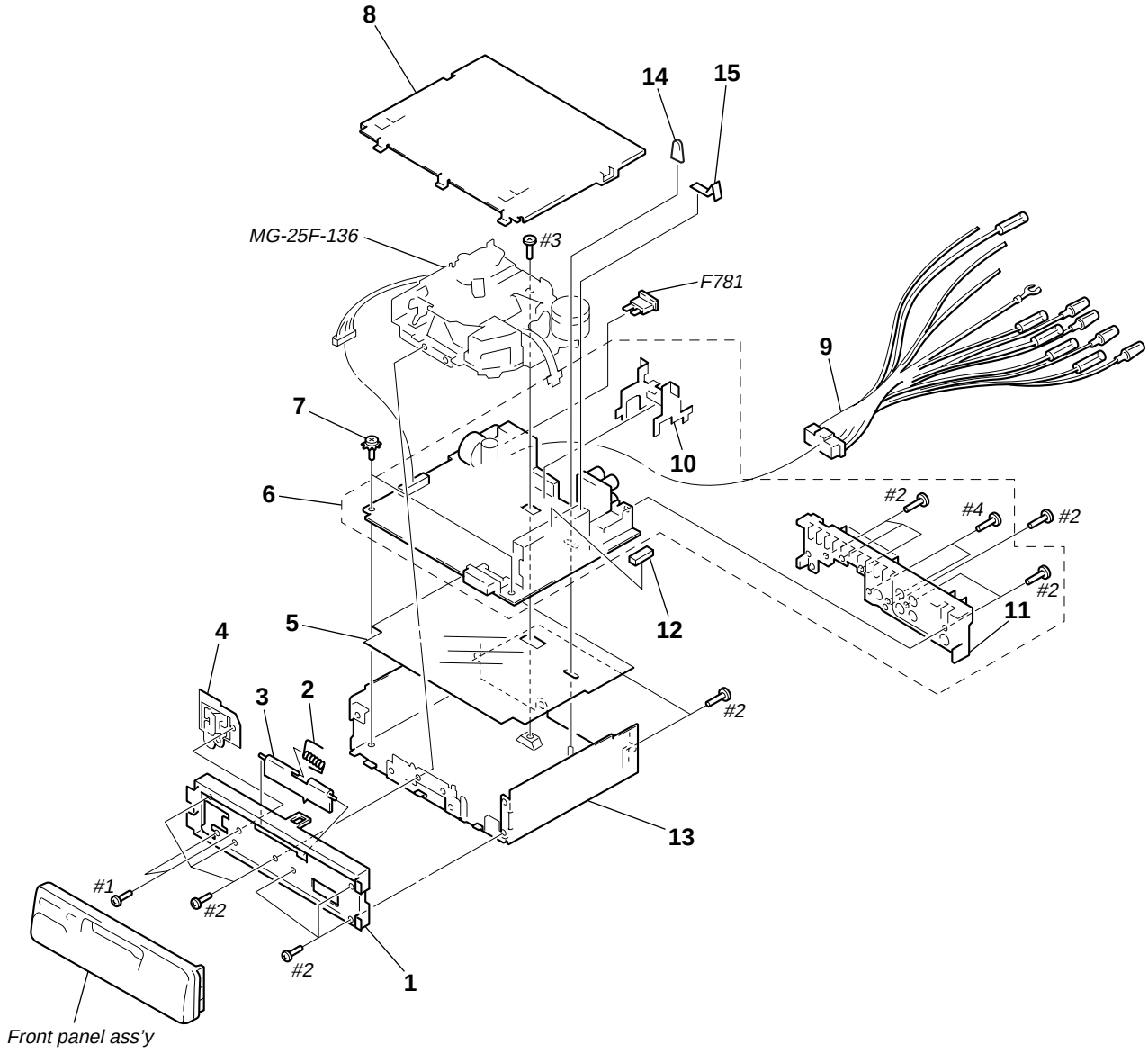


SECTION 7
EXPLODED VIEWS

NOTE:

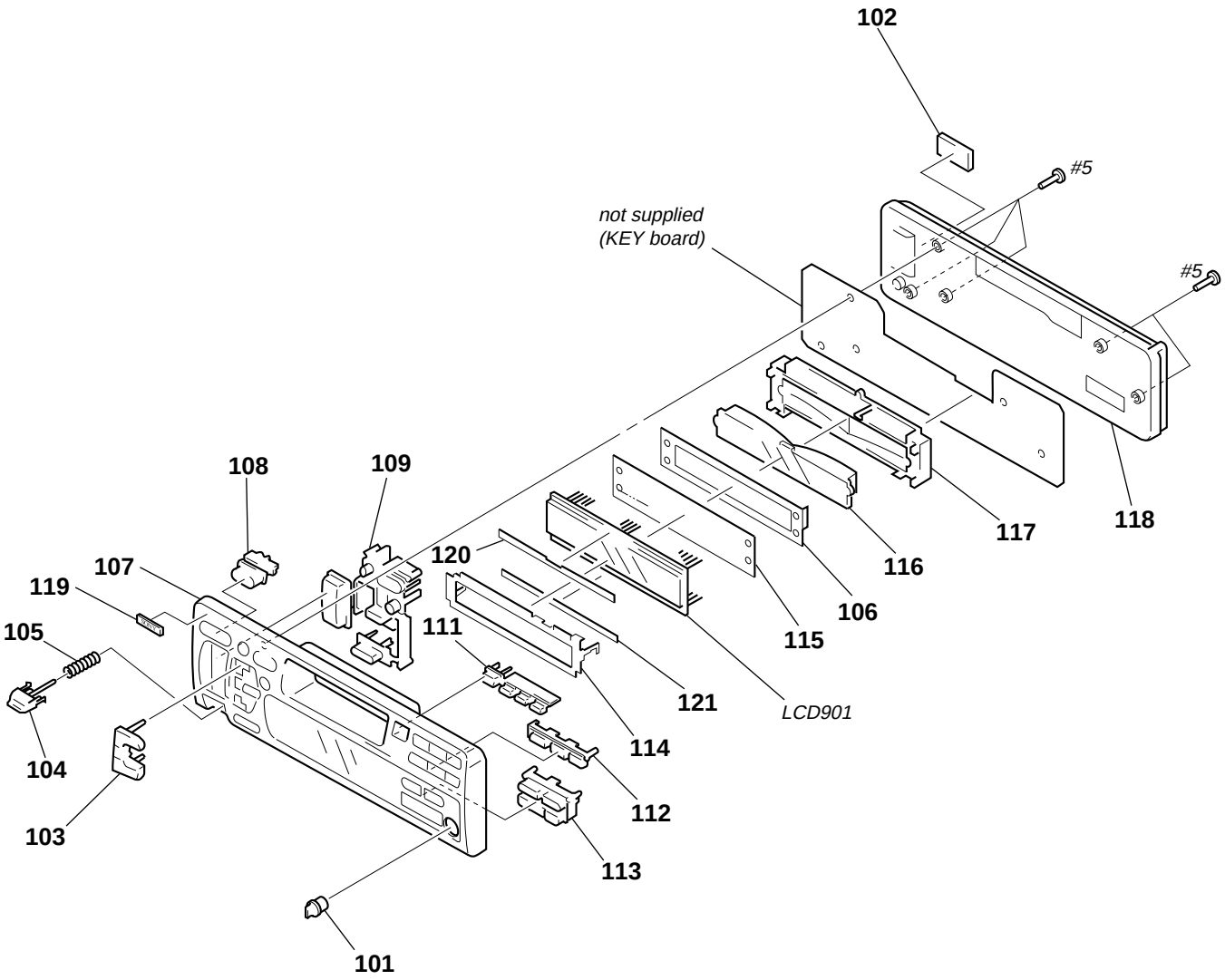
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

(1) CHASSIS SECTION



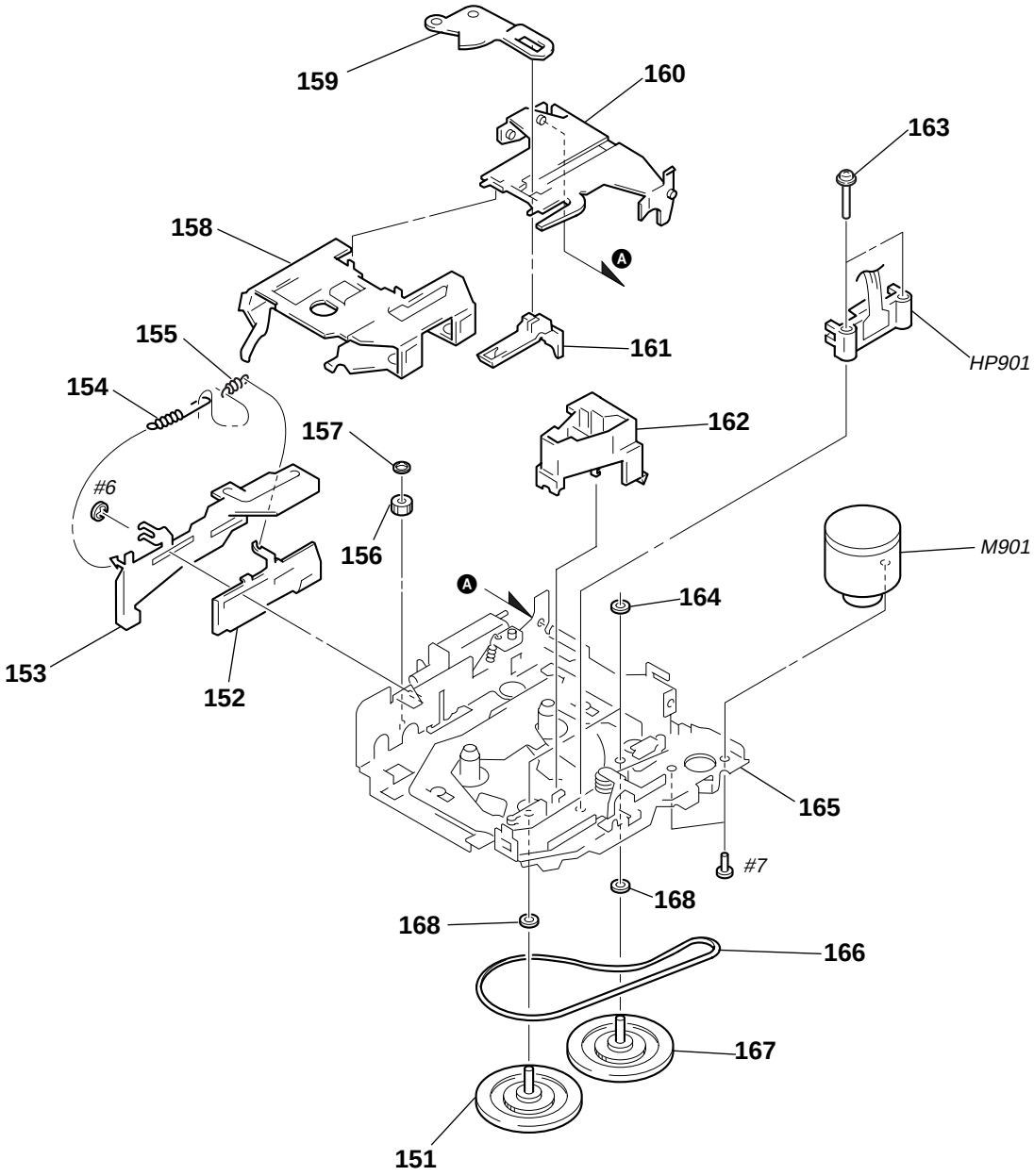
Ref. No.	Part No.	Description	Remark
1	3-018-383-01	PANEL, SUB	
2	3-935-003-01	SPRING, TORSION	
3	3-932-205-41	DOOR, CASSETTE (E)	
3	3-932-205-61	DOOR, CASSETTE (US,Canadian)	
4	X-3367-636-1	LOCK ASSY	
* 5	3-010-377-01	INSULATOR	
* 6	A-3313-439-A	MAIN BOARD, COMPLETE (E)	
* 6	A-3313-440-A	MAIN BOARD, COMPLETE (US,Canadian)	
7	3-915-923-01	SCREW, GROUND POINT	
* 8	X-3373-270-1	COVER ASSY	
9	1-776-207-31	CORD (WITH CONNECTOR) (POWER) (US, Canadian)	
9	1-776-207-81	CORD (WITH CONNECTOR) (POWER) (E)	
* 10	3-018-390-01	BRACKET (IC)	
* 11	3-018-389-01	HEAT SINK	
12	3-935-014-01	CUSHION (U)	
* 13	3-009-813-01	CHASSIS	
14	3-012-859-01	CAP (25), RUBBER	
15	3-937-650-01	PLATE (C), GROUND	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
101	3-018-799-01	BUTTON (D-BASS)	
102	3-015-036-01	CUSHION (BACK PANEL)	
103	3-016-932-01	BUTTON (L) (2) (+. -)	
104	3-017-103-01	BUTTON (RELEASE)	
105	3-932-475-01	SPRING (RELEASE)	
* 106	3-019-149-01	PLATE, LCD	
107	X-3374-687-1	PANEL SUB ASSY	
108	3-016-938-01	BUTTON (SOURCE)	
109	3-018-658-01	BUTTON (L) (+ ▶▶I ▶▶. SEEK AMS. I◀◀ ◀◀ -. ●. OFF. ●. SEL. ATT)	
111	3-016-933-01	BUTTON (1-3) (⏏. 1. 2. 3)	
112	3-016-931-11	BUTTON (4-6) (4. 5. 6)	
113	3-016-936-01	BUTTON (R) (B) (BTM. LCL. -. DISC. +)	
* 114	3-019-151-01	PLATE (LCD), GROUND	
* 115	3-019-150-01	SHEET (REFLECTOR)	
* 116	3-018-612-01	PLATE, LIGHT GUIDE	
* 117	3-018-611-01	HOLDER (LCD)	
118	3-009-295-01	PANEL, FRONT BACK	
119	3-904-194-01	EMBLEM (NO. 2.5), SONY	
* 120	3-024-391-01	SHEET (LCD)	
* 121	3-024-846-01	SHEET (LCD) B	
LCD901	1-801-967-51	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION (MG-25F-136)



Ref. No.	Part No.	Description	Remark
151	A-3291-667-A	CLUTCH (FR) ASSY	
* 152	3-019-130-01	LEVER (LDG-A)	
* 153	3-019-131-01	LEVER (LDG-B)	
154	3-020-539-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
* 159	3-020-532-01	ARM (SUCTION)	
160	3-020-534-01	HANGER	

Ref. No.	Part No.	Description	Remark
161	3-933-346-01	CATCHER	
162	3-933-344-01	GUIDE (C)	
163	3-014-798-01	SCREW (HEAD), SPECIAL	
164	3-364-151-01	WASHER	
165	A-3301-267-A	CHASSIS ASSY (G)	
166	3-017-302-01	BELT (25)	
167	3-936-853-01	FLYWHEEL (F)	
168	3-701-437-21	WASHER	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTN/REEL)	

KEY

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
		KEY BOARD			
		**********			
*	3-018-611-01	HOLDER (LCD)			
*	3-018-612-01	PLATE, LIGHT GUIDE			
*	3-019-149-01	PLATE, LCD			
*	3-019-150-01	SHEET (REFLECTOR)			
*	3-019-151-01	PLATE (LCD), GROUND			
		< CAPACITOR >			
C901	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C902	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C903	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C904	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
		< CONNECTOR >			
CNP901	1-764-423-11	PIN, CONNECTOR 12P			
		< DIODE >			
D901	8-719-420-90	DIODE	MA8051-M		
D902	8-719-422-64	DIODE	MA8062-M		
D903	8-719-422-64	DIODE	MA8062-M		
D904	8-719-422-64	DIODE	MA8062-M		
D905	8-719-422-64	DIODE	MA8062-M		
		< IC >			
IC901	8-759-443-68	IC	LC75834JED		
		< CHIP CONDUCTOR >			
JC901	1-216-295-00	SHORT	0		
JC902	1-216-295-00	SHORT	0		
JC951	1-216-296-00	SHORT	0		
JC952	1-216-296-00	SHORT	0		
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-801-967-51	DISPLAY PANEL, LIQUID CRYSTAL			
		< SWITCH >			
LSW901	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (OFF)			
LSW902	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)			
LSW903	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (MODE◀I▶)			
LSW904	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (+ ▶▶I ▶▶)			
LSW905	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (I◀◀ ◀◀ -)			
LSW906	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (-)			
LSW907	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SEL)			
LSW908	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (+)			
LSW909	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (ATT)			
LSW910	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (DSPL)			
LSW911	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (BTM)			
LSW912	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (LCL)			
LSW921	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (⏏)			
LSW922	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (1/INTRO)			
LSW923	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (2/REPEAT)			
LSW924	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (3/SHUF)			
LSW925	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (6/BL SKIP)			
LSW926	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (5/ATA)			
LSW927	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (4)			
LSW929	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (DISC/PRESET +)			
LSW930	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (DISC/PRESET -)			
		< PILOT LAMP >			
PL901	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)			
PL902	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)			
		< RESISTOR >			
R901	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R902	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R903	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R904	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R905	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R906	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R907	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R908	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R909	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R910	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R911	1-208-806-11	RES, CHIP	10K	2%	1/10W
R921	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R922	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R923	1-216-647-11	METAL CHIP	680	0.5%	1/10W

Ref. No.	Part No.	Description			Remark
R924	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R925	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R926	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R927	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R928	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R929	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R951	1-216-190-00	RES, CHIP	470	5%	1/8W
R952	1-216-089-00	RES, CHIP	47K	5%	1/10W
R953	1-216-049-11	RES, CHIP	1K	5%	1/10W
R954	1-216-049-11	RES, CHIP	1K	5%	1/10W
R955	1-216-049-11	RES, CHIP	1K	5%	1/10W
R956	1-216-049-11	RES, CHIP	1K	5%	1/10W
R961	1-216-027-00	METAL CHIP	120	5%	1/10W
R962	1-216-025-00	RES, CHIP	100	5%	1/10W
R963	1-216-033-00	METAL CHIP	220	5%	1/10W
R964	1-216-035-00	METAL CHIP	270	5%	1/10W
R965	1-216-035-00	METAL CHIP	270	5%	1/10W
R966	1-216-025-00	RES, CHIP	100	5%	1/10W
R981	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R982	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R983	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R984	1-216-081-00	METAL CHIP	22K	5%	1/10W
		< SWITCH >			
SW951	1-762-937-11	SWITCH, ROTARY (D-BASS)			
**********					
*	A-3313-439-A	MAIN BOARD, COMPLETE (E)			
*	A-3313-440-A	MAIN BOARD, COMPLETE (US, Canadian)			
		**********			
*	3-018-389-01	HEAT SINK			
*	3-018-390-01	BRACKET (IC)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-124-584-00	ELECT	100uF	20%	10V
C4	1-126-157-11	ELECT	10uF	20%	16V
C5	1-124-584-00	ELECT	100uF	20%	10V
C6	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C7	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C8	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C9	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-126-160-11	ELECT	1uF	20%	50V
C12	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C16	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C17	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C18	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C19	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C22	1-124-584-00	ELECT	100uF	20%	10V
C23	1-124-234-00	ELECT	22uF	20%	16V
C25	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V

Ref. No.	Part No.	Description			Remark
C26	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C27	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C101	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C102	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C104	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C105	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C106	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C107	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C108	1-126-163-11	ELECT	4.7uF	20%	50V
C109	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C110	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C121	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (E)
C121	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (US, Canadian)
C122	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (US, Canadian)
C122	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V (E)
C123	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C124	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C141	1-126-157-11	ELECT	10uF	20%	16V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (E)
C151	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (US, Canadian)
C152	1-124-257-00	ELECT	2.2uF	20%	50V
C161	1-126-160-11	ELECT	1uF	20%	50V
C162	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C163	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C164	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C165	1-126-157-11	ELECT	10uF	20%	16V
C166	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C167	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C168	1-126-157-11	ELECT	10uF	20%	16V
C169	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C170	1-163-157-00	CERAMIC CHIP	10PF	5%	50V
C171	1-126-163-11	ELECT	4.7uF	20%	50V
C172	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C174	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C181	1-126-163-11	ELECT	4.7uF	20%	50V
C182	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C183	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C184	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C191	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C201	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C202	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C204	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C205	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C206	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C207	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C208	1-126-163-11	ELECT	4.7uF	20%	50V
C209	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C210	1-163-197-00	CERAMIC CHIP	470PF	5%	50V
C241	1-126-157-11	ELECT	10uF	20%	16V
C242	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C251	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (E)
C251	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (US, Canadian)
C252	1-124-257-00	ELECT	2.2uF	20%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C261	1-126-160-11	ELECT	1uF	20%	50V
C262	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C263	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C264	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C265	1-126-157-11	ELECT	10uF	20%	16V
C266	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C267	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C268	1-126-157-11	ELECT	10uF	20%	16V
C269	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C270	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C271	1-126-163-11	ELECT	4.7uF	20%	50V
C272	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C274	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C281	1-126-163-11	ELECT	4.7uF	20%	50V
C282	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C283	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C284	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C301	1-124-234-00	ELECT	22uF	20%	16V
C302	1-131-359-41	ELECT	10uF	10%	25V
C303	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C305	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C306	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C331	1-124-584-00	ELECT	100uF	20%	10V
C332	1-124-234-00	ELECT	22uF	20%	16V
C353	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C354	1-126-157-11	ELECT	10uF	20%	16V
C355	1-126-157-11	ELECT	10uF	20%	16V
C356	1-126-934-11	ELECT	220uF	20%	16V
C357	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C359	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C501	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C502	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C503	1-124-584-00	ELECT	100uF	20%	10V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C551	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C552	1-124-584-00	ELECT	100uF	20%	10V
C553	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C554	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C571	1-126-163-11	ELECT	4.7uF	20%	50V
C581	1-162-638-11	CERAMIC CHIP	1uF		16V
C582	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C583	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C602	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C611	1-126-157-11	ELECT	10uF	20%	16V
C612	1-126-157-11	ELECT	10uF	20%	16V
C613	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C614	1-126-157-11	ELECT	10uF	20%	16V
C615	1-126-157-11	ELECT	10uF	20%	16V
C616	1-126-157-11	ELECT	10uF	20%	16V
C617	1-126-157-11	ELECT	10uF	20%	16V
C621	1-126-157-11	ELECT	10uF	20%	16V
C622	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C623	1-124-589-11	ELECT	47uF	20%	16V
C701	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C702	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C703	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C751	1-126-096-11	ELECT	10uF	20%	35V
C752	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C754	1-124-257-00	ELECT	2.2uF	20%	50V
C755	1-124-589-11	ELECT	47uF	20%	16V
C781	1-126-936-11	ELECT	3300uF	20%	16V
C782	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C783	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C785	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C786	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C791	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C901	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C906	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (E)
C906	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (US, Canadian)
C907	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (E)
C907	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (US, Canadian)
C908	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C909	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C910	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C912	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C913	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C914	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN301	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P			
* CN351	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN581	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CN701	1-764-422-11	PLUG, CONNECTOR 12P			
CN781	1-774-701-11	PIN, CONNECTOR 16P			
		< CONPOSITION CIRCUIT BLOCK >			
CP1	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D1	8-719-991-65	DIODE SB02W03C			
D21	8-719-423-10	DIODE MA8100-M-TX			
D91	8-719-420-90	DIODE MA8051-M			
D301	8-719-404-49	DIODE MA111			
D351	8-719-422-97	DIODE MA8091-M (TA)			
D352	8-719-404-49	DIODE MA111			
D501	8-719-400-20	DIODE MA152WA			
D502	8-719-911-19	DIODE 1SS119 (E)			
D551	8-719-400-20	DIODE MA152WA			
D552	8-719-404-49	DIODE MA111			
D553	8-719-404-49	DIODE MA111			
D571	8-719-034-94	DIODE MA4180-M (QZ)			
D572	8-719-110-03	DIODE RD7.5ESB2			
D581	8-719-017-62	DIODE MA8068-L-TX			
D582	8-719-057-80	DIODE MA8160-M-TX			
D584	8-719-034-94	DIODE MA4180-M (QZ)			
D585	8-719-035-74	DIODE MA4062-M (TA)			
D586	8-719-034-94	DIODE MA4180-M (QZ)			
D601	8-719-423-32	DIODE MA8120-M			
D621	8-719-035-54	DIODE MA4039-M (TA)			
D622	8-719-911-19	DIODE 1SS119			
D701	8-719-035-77	DIODE MA4068-L (TA)			
D702	8-719-035-77	DIODE MA4068-L (TA)			

Ref. No.	Part No.	Description	Remark
D703	8-719-035-74	DIODE MA4062-M (TA)	
D704	8-719-035-74	DIODE MA4062-M (TA)	
D705	8-719-035-74	DIODE MA4062-M (TA)	
D706	8-719-035-74	DIODE MA4062-M (TA)	
D707	8-719-034-94	DIODE MA4180-M (QZ)	
D708	8-719-035-74	DIODE MA4062-M (TA)	
D709	8-719-035-74	DIODE MA4062-M (TA)	
D721	8-719-970-02	DIODE 1SR139-400	
D722	8-719-970-02	DIODE 1SR139-400	
D723	8-719-970-02	DIODE 1SR139-400	
D724	8-719-970-02	DIODE 1SR139-400	
D731	8-719-970-02	DIODE 1SR139-400	
D732	8-719-970-02	DIODE 1SR139-400	
D733	8-719-970-02	DIODE 1SR139-400	
D734	8-719-970-02	DIODE 1SR139-400	
D780	8-719-970-02	DIODE 1SR139-400	
D781	8-719-049-38	DIODE 1N5404TU	
D782	8-719-970-02	DIODE 1SR139-400	
D783	8-719-970-02	DIODE 1SR139-400	
D784	8-719-422-64	DIODE MA8062-M	
D785	8-719-035-74	DIODE MA4062-M (TA) (E)	
		< IC >	
IC301	8-752-079-78	IC CXA2509AQ-T4	
IC331	8-759-443-67	IC LC75373ED	
IC351	8-759-823-87	IC LB1638M	
IC501	8-759-493-98	IC uPD17708GC-567-3B9	
IC551	8-759-363-81	IC XC61AN4002PR	
IC581	8-759-449-89	IC BA8270F-E2	
IC611	8-759-347-49	IC BA3918-V2	
IC751	8-759-490-74	IC TDA7384	
		< JACK >	
J1	1-764-808-14	JACK (ANT) (ANT IN)	
J331	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN/LINE OUT REAR)	
J561	1-566-822-41	JACK (REMOTE IN)	
		< CHIP CONDUCTOR >	
JC1	1-216-296-00	SHORT 0	
JC2	1-216-295-00	SHORT 0	
JC3	1-216-295-00	SHORT 0 (US, Canadian)	
JC4	1-216-296-00	SHORT 0	
JC151	1-216-296-00	SHORT 0	
JC161	1-216-295-00	SHORT 0	
JC162	1-216-295-00	SHORT 0	
JC163	1-216-296-00	SHORT 0	
JC164	1-216-296-00	SHORT 0	
JC251	1-216-296-00	SHORT 0	
JC301	1-216-295-00	SHORT 0	
JC302	1-216-295-00	SHORT 0	
JC304	1-216-296-00	SHORT 0	
JC331	1-216-296-00	SHORT 0	
JC351	1-216-295-00	SHORT 0	
JC501	1-216-296-00	SHORT 0	
JC502	1-216-295-00	SHORT 0	
JC503	1-216-296-00	SHORT 0	
JC504	1-216-296-00	SHORT 0	
JC506	1-216-296-00	SHORT 0	
JC507	1-216-296-00	SHORT 0	
JC509	1-216-295-00	SHORT 0 (E)	
JC510	1-216-295-00	SHORT 0	
JC561	1-216-295-00	SHORT 0	
JC581	1-216-296-00	SHORT 0	
JC582	1-216-296-00	SHORT 0	
JC601	1-216-296-00	SHORT 0	
JC611	1-216-296-00	SHORT 0	
JC751	1-216-296-00	SHORT 0	
JC781	1-216-295-00	SHORT 0	
JC901	1-216-295-00	SHORT 0 (US, Canadian)	
JC903	1-216-295-00	SHORT 0 (E)	
JC904	1-216-295-00	SHORT 0	
JC961	1-216-296-00	SHORT 0	
JC962	1-216-296-00	SHORT 0	
JC963	1-216-296-00	SHORT 0	
JC990	1-216-296-00	SHORT 0	
JC991	1-216-296-00	SHORT 0	
JC992	1-216-296-00	SHORT 0	
JC993	1-216-296-00	SHORT 0	
JC994	1-216-295-00	SHORT 0	
		< COIL >	
L501	1-410-509-11	INDUCTOR 10uH	
L781	1-411-669-12	COIL, CHOKE	
L901	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q21	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q22	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q171	8-729-920-21	TRANSISTOR DTC314TKH04	
Q181	8-729-920-21	TRANSISTOR DTC314TKH04	
Q271	8-729-920-21	TRANSISTOR DTC314TKH04	
Q281	8-729-920-21	TRANSISTOR DTC314TKH04	
Q351	8-729-015-11	TRANSISTOR 2SD1802FAST-TL	
Q352	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q353	8-729-900-53	TRANSISTOR DTC114EK	
Q354	8-729-106-60	TRANSISTOR 2SB1115A	
Q355	8-729-900-53	TRANSISTOR DTC114EK	
Q551	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q571	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q581	8-729-900-53	TRANSISTOR DTC114EK	
Q601	8-729-423-99	TRANSISTOR 2SD2137-OP	
Q602	8-729-900-53	TRANSISTOR DTC114EK	
Q603	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q621	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q622	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R1	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R3	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R4	1-249-429-11	CARBON 10K 5% 1/4W	(E)
R5	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R6	1-249-429-11	CARBON 10K 5% 1/4W	(E)
R7	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R8	1-247-899-11	CARBON 680K 5% 1/4W	

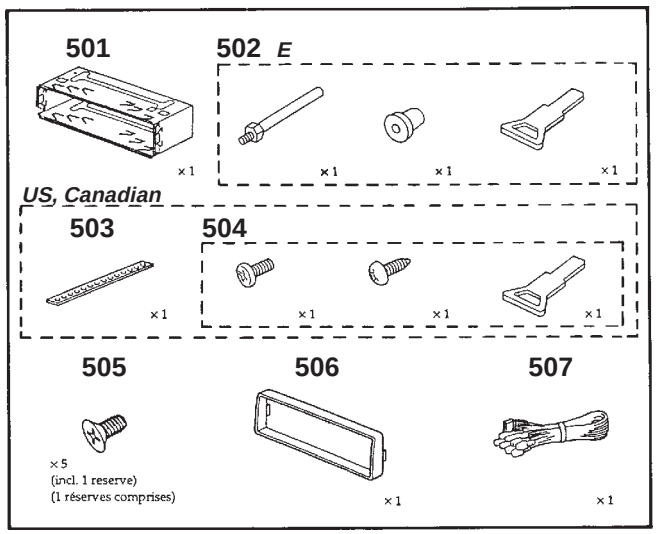
MAIN

Ref. No.	Part No.	Description			Remark
R9	1-216-180-00	RES, CHIP	180	5%	1/8W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-249-413-11	CARBON	470	5%	1/4W
R12	1-216-073-00	METAL CHIP	10K	5%	1/10W
R13	1-216-049-11	RES, CHIP	1K	5%	1/10W
R14	1-216-049-11	RES, CHIP	1K	5%	1/10W
R21	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R22	1-216-198-00	RES, CHIP	1K	5%	1/8W
R23	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R24	1-249-421-11	CARBON	2.2K	5%	1/4W
R91	1-216-049-11	RES, CHIP	1K	5%	1/10W (US, Canadian)
R103	1-216-041-00	METAL CHIP	470	5%	1/10W
R104	1-216-109-00	METAL CHIP	330K	5%	1/10W
R105	1-216-077-00	METAL CHIP	15K	5%	1/10W
R106	1-216-079-00	METAL CHIP	18K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-081-00	METAL CHIP	22K	5%	1/10W
R121	1-216-198-00	RES, CHIP	1K	5%	1/8W (US, Canadian)
R121	1-216-200-11	RES, CHIP	1.2K	5%	1/8W (E)
R122	1-216-081-00	METAL CHIP	22K	5%	1/10W
R141	1-216-073-00	METAL CHIP	10K	5%	1/10W
R142	1-216-198-00	RES, CHIP	1K	5%	1/8W
R151	1-216-049-11	RES, CHIP	1K	5%	1/10W
R152	1-216-077-00	METAL CHIP	15K	5%	1/10W (US, Canadian)
R152	1-216-089-00	RES, CHIP	47K	5%	1/10W (E)
R161	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R171	1-216-033-00	METAL CHIP	220	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R174	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R175	1-216-089-00	RES, CHIP	47K	5%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-073-00	METAL CHIP	10K	5%	1/10W
R184	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R185	1-216-089-00	RES, CHIP	47K	5%	1/10W
R186	1-216-182-00	RES, CHIP	220	5%	1/8W
R191	1-216-073-00	METAL CHIP	10K	5%	1/10W
R192	1-216-097-00	RES, CHIP	100K	5%	1/10W
R203	1-216-041-00	METAL CHIP	470	5%	1/10W
R204	1-216-109-00	METAL CHIP	330K	5%	1/10W
R205	1-216-077-00	METAL CHIP	15K	5%	1/10W
R206	1-216-079-00	METAL CHIP	18K	5%	1/10W
R207	1-216-222-00	RES, CHIP	10K	5%	1/8W
R208	1-216-081-00	METAL CHIP	22K	5%	1/10W
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W
R242	1-216-049-11	RES, CHIP	1K	5%	1/10W
R251	1-216-049-11	RES, CHIP	1K	5%	1/10W
R252	1-216-077-00	METAL CHIP	15K	5%	1/10W (US, Canadian)
R252	1-216-089-00	RES, CHIP	47K	5%	1/10W (E)
R261	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R271	1-216-033-00	METAL CHIP	220	5%	1/10W
R272	1-216-073-00	METAL CHIP	10K	5%	1/10W
R274	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R275	1-216-089-00	RES, CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R281	1-216-033-00	METAL CHIP	220	5%	1/10W
R282	1-216-073-00	METAL CHIP	10K	5%	1/10W
R284	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R285	1-216-089-00	RES, CHIP	47K	5%	1/10W
R286	1-216-033-00	METAL CHIP	220	5%	1/10W
R301	1-216-079-00	METAL CHIP	18K	5%	1/10W
R302	1-216-097-00	RES, CHIP	100K	5%	1/10W
R303	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R304	1-216-077-00	METAL CHIP	15K	5%	1/10W
R305	1-249-429-11	CARBON	10K	5%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/4W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-216-105-00	RES, CHIP	220K	5%	1/10W
R331	1-249-393-11	CARBON	10	5%	1/4W
R351	1-216-049-11	RES, CHIP	1K	5%	1/10W
R352	1-249-385-11	CARBON	2.2	5%	1/6W
R353	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R354	1-216-073-00	METAL CHIP	10K	5%	1/10W
R501	1-216-097-00	RES, CHIP	100K	5%	1/10W
R502	1-216-097-00	RES, CHIP	100K	5%	1/10W
R503	1-216-097-00	RES, CHIP	100K	5%	1/10W
R504	1-216-097-00	RES, CHIP	100K	5%	1/10W
R505	1-216-097-00	RES, CHIP	100K	5%	1/10W
R506	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R507	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R508	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R509	1-216-097-00	RES, CHIP	100K	5%	1/10W
R510	1-249-441-11	CARBON	100K	5%	1/4W
R511	1-216-699-11	METAL CHIP	100K	0.5%	1/10W (E)
R512	1-216-699-11	METAL CHIP	100K	0.5%	1/10W (E)
R513	1-208-826-11	RES, CHIP	68K	2%	1/10W (US, Canadian)
R514	1-216-699-11	METAL CHIP	100K	0.5%	1/10W (US, Canadian)
R516	1-216-097-00	RES, CHIP	100K	5%	1/10W
R517	1-216-097-00	RES, CHIP	100K	5%	1/10W
R518	1-216-097-00	RES, CHIP	100K	5%	1/10W
R519	1-216-097-00	RES, CHIP	100K	5%	1/10W
R522	1-216-097-00	RES, CHIP	100K	5%	1/10W
R523	1-216-097-00	RES, CHIP	100K	5%	1/10W
R524	1-216-097-00	RES, CHIP	100K	5%	1/10W
R525	1-216-097-00	RES, CHIP	100K	5%	1/10W
R526	1-216-097-00	RES, CHIP	100K	5%	1/10W
R527	1-216-097-00	RES, CHIP	100K	5%	1/10W
R528	1-216-097-00	RES, CHIP	100K	5%	1/10W
R530	1-216-097-00	RES, CHIP	100K	5%	1/10W
R531	1-216-097-00	RES, CHIP	100K	5%	1/10W (US, Canadian)
R532	1-216-097-00	RES, CHIP	100K	5%	1/10W (E)
R533	1-216-097-00	RES, CHIP	100K	5%	1/10W
R535	1-216-097-00	RES, CHIP	100K	5%	1/10W
R537	1-216-246-00	RES, CHIP	100K	5%	1/8W
R538	1-216-097-00	RES, CHIP	100K	5%	1/10W
R539	1-216-097-00	RES, CHIP	100K	5%	1/10W
R540	1-249-421-11	CARBON	2.2K	5%	1/4W
R541	1-249-421-11	CARBON	2.2K	5%	1/4W
R542	1-249-421-11	CARBON	2.2K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R543	1-249-421-11	CARBON	2.2K	5%	1/4W
R544	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R545	1-249-429-11	CARBON	10K	5%	1/4W
R546	1-249-413-11	CARBON	470	5%	1/4W
R551	1-216-097-00	RES, CHIP	100K	5%	1/10W
R552	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R561	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R562	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R563	1-216-025-00	RES, CHIP	100	5%	1/10W
R564	1-216-025-00	RES, CHIP	100	5%	1/10W
R571	1-216-097-00	RES, CHIP	100K	5%	1/10W
R572	1-216-089-00	RES, CHIP	47K	5%	1/10W
R573	1-216-089-00	RES, CHIP	47K	5%	1/10W
R574	1-249-421-11	CARBON	2.2K	5%	1/4W
R575	1-216-073-00	METAL CHIP	10K	5%	1/10W
R581	1-216-073-00	METAL CHIP	10K	5%	1/10W
R582	1-216-025-00	RES, CHIP	100	5%	1/10W
R583	1-247-807-31	CARBON	100	5%	1/4W
R584	1-216-166-00	RES, CHIP	47	5%	1/8W
R601	1-249-393-11	CARBON	10	5%	1/4W
R602	1-249-395-11	CARBON	15	5%	1/4W
R603	1-216-186-00	RES, CHIP	330	5%	1/8W
R621	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R701	1-216-025-00	RES, CHIP	100	5%	1/10W
R702	1-216-025-00	RES, CHIP	100	5%	1/10W
R703	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R704	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R705	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R706	1-216-206-00	RES, CHIP	2.2K	5%	1/8W
R707	1-216-049-11	RES, CHIP	1K	5%	1/10W
R708	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R709	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R710	1-216-025-00	RES, CHIP	100	5%	1/10W
R751	1-216-198-00	RES, CHIP	1K	5%	1/8W
R752	1-216-049-11	RES, CHIP	1K	5%	1/10W
R781	1-216-049-11	RES, CHIP	1K	5%	1/10W
R901	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R902	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
		< SWITCH >			
S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
S502	1-571-478-11	SWITCH, SLIDE (FREQUENCY SELECT) (E)			
S551	1-692-431-21	SWITCH, TACTILE (RESET)			
		< TUNER >			
TU1	A-3282-019-A	TUNER UNIT TUX-008 (EA) (E)			
TU1	A-3282-034-A	TUNER UNIT TUX-010 (E) (US, Canadian)			
		< VIBRATOR >			
X501	1-567-713-11	VIBRATOR, CRYSTAL (4.5MHz)			
**********					
		MISCELLANEOUS			
		**********			
9	1-776-207-31	CORD (WITH CONNECTOR) (POWER) (US, Canadian)			
9	1-776-207-81	CORD (WITH CONNECTOR) (POWER) (E)			

Ref. No.	Part No.	Description	Remark
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-10	SCREW +B 2X4	
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#3	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#4	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#5	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#6	7-624-104-04	STOP RING 2.0, TYPE-E	
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-861-687-11	MANUAL, INSTRUCTION (ENGLISH) (US, Canadian)	
	3-861-687-21	MANUAL, INSTRUCTION (FRENCH) (Canadian)	
	3-861-687-31	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (E)	
	3-861-688-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (US, Canadian)	
	3-861-688-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (E)	
	X-3373-412-1	CASE (PANEL) ASSY (for FRONT PANEL)	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	3-916-161-31	FRAME ASSY	
502	X-3370-077-1	SCREW ASSY (AE. KEY), FITTING (E)	
503	3-924-961-01	SUPPORT (ND), FITTING (US, Canadian)	
504	X-3370-076-1	SCREW ASSY (KEY), FITTING (US, Canadian)	
505	X-3371-913-1	SCREW ASSY (J)	
506	3-018-384-01	COLLAR	
507	1-776-207-31	CORD (WITH CONNECTOR) (POWER) (US, Canadian)	
507	1-776-207-81	CORD (WITH CONNECTOR) (POWER) (E)	



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